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ORIGINAL PACKAGES
AS IMPORTED.

PERSIAN
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AND
LOZENGES

Cucumber
AND
Glycerine Cream
IN
BULK & BOTTLED.

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"SILVER CHURN" DAIRY PREPARATIONS.

Butter Colouring.

GLASS BOTTLES.. 6d., 1/, 2/, 5/ Retail.
4/, 8/, 16/, 38/ per dozen.
BULK 1/ per lb. 100/ cwt. in 2-gallon Bottles.
90/ in 1-cwt. Kegs. 85/ in 3-cwt. Barrels.

Butter Powder
and Preserver.

BOXES 6d., 1/, 2/, 5/ Retail.
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BULK 1/ per lb. 84/ cwt. in cwt. Kegs.

Essence of Rennet,

For Junkets, Curds and Whey,
Cheese Cakes, &c., &c.

GLASS BOTTLES.. 6d., 1/, 2/, 5/ Retail.
4/, 8/, 16/, 38/ per dozen.
BULK 1/ per lb. 10d. in 2-gallon Bottles.

Liquid Annatto,
or Cheese Colouring.

STONE BOTTLES. 6d., 1/, 2/, 5/ Retail.
4/, 8/, 16/, 38/ per dozen.
BULK 1/ per lb. 10d. in 2-gallon Bottles.
84/ in 12-gallons. 80/ in 3-cwt. casks.

Cheese Rennet,

OF

SPECIAL STRENGTH.

STONE BOTTLES.. 1-pints, 9d. Retail. 7/ doz.
Pints, 1/3 " 12/ "
Quarts, 2/ " 20/ "
1-gall., 4/ " 38/ "
1-gall., 8/ " 72/ "
BULK. At Special Prices. Inquiries should state quantity.

These Goods are selling well in the Agricultural districts. They are very attractively got up, are superior to any foreign makes, and are well worth the attention of the Trade, as they leave a good margin to the seller.

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Unguentum Petrolei is Manufactured by Messrs. Houghton & Co., Philadelphia, and is a very superior article, for which we are their Agents.

In 1-lb. Tins, 1s.; 5-lb. Tins, 10d. per lb.; 8½d. per lb. in bulk.

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PARAFFINUM MOLLE, B.P.

(PIONEER BRAND) Registered Trade Mark.

Equal to and Cheaper than **VASELINE**.

FOR MEDICAL AND PHARMACEUTICAL PURPOSES.

**WHITE, YELLOW, VETERINARY,
AND WATERPROOF.**

We have the pleasure to inform our Customers and Chemists and Druggists generally that we are still supplying the above in **bulk**, and intend to continue to do so. We are sending out all qualities in the following size Packages:—

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We guarantee our Jelly to be perfectly pure, and not a mixture of Wax and Oil.

Our process of manufacture is to evaporate and sweeten the crude material by hot air, and then filter through animal charcoal, **no acids or alkalies** of any description being used during the process.

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Pure Castor Oil, Cod Liver Oil, White Mineral Oil, Best Eating Olive Oil, Pale and Crude Carbolic Acid, Carbolic Powders, Sheep Dip, Benzine 50 per cent. and 90 per cent., Crude and Rectified Spirits of Tar, Stockholm Tar, Camphor Ice, Carbon Candles.

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YELLOW—1 lb. and 7 lb. Tins, **7d.** per lb. ; 14 lb. and 28 lb. Tins, **6d.** per lb.

WHITE—1 lb. & 7 lb. Tins, **1s. 2d.** per lb. ; 14 lb. & 28 lb. Tins, **1s. 1d.** per lb.

Also in 56 lb. and 112 lb. Drums and 3 cwt. Casks at Special Quotations.

 **SPECIAL DISCOUNT FOR QUANTITY.**

ALSO

FOSSILINE, SIMPLE, 6d. Bottles, 3s. 6d. per doz. ;

1s. Bottles, 7s. doz.

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(Paraffinum Mollis, B.P.).

TRADE MARK.

EQUAL TO VASELINE.



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1-lb. Tins, self-fitting lids, at 4½d. 1b.
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 28-lb. " " " 36s. "
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IN ALL SIZE
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EQUAL TO VASELINE.

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Absolutely Genuine Paraffinum Molle of the
very Purest Form, and we claim that it
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(REGISTERED).

UNIVERSALLY ADOPTED BY THE MEDICAL PROFESSION FOR
OPHTHALMIA, SCURVY, RINGWORM,
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For External and Internal Irritation of every kind.

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For Public Speakers, Actors, and Singers.

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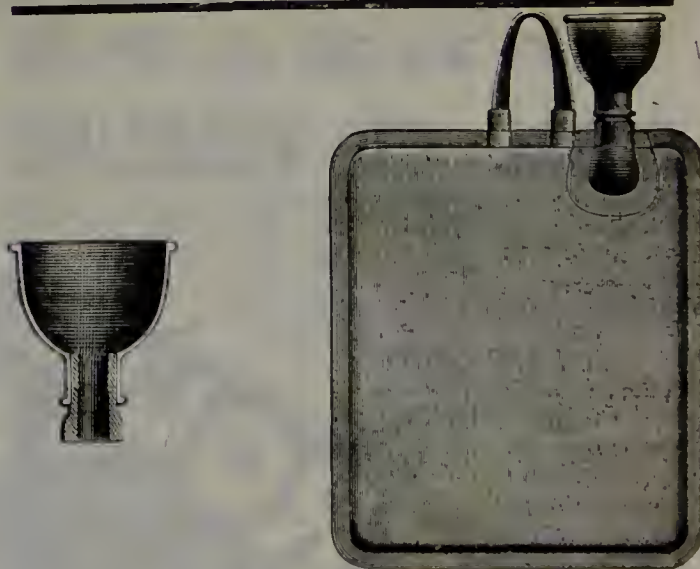
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This Water Bottle is made of the best quality rubber, the cap being
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Made in 12 sizes varying from 8 by 6 to 16 by 12, and obtainable from
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FOR THE

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These articles are better this year than ever before, and we will be willing to send any of them on approval to any Chemist or Physician in the United Kingdom who may think he would like to see them with a view of presentation at Christmas to medical friends.

The handsomest and most useful diary is that for enclosure in the leather wallet. It is covered with silk. The wallets are very elegant and useful for holding cards and papers. Price of silk-covered diary, 2s. 6d. The wallet to go outside of this costs in morocco, 2s. In velvet pile leather, which is very soft and fine, or in Russian leather, the price is 3s. The diary in ordinary morocco, with durable tuck, 2s. 6d.

Any Chemists who do not wish to give any diaries away will find them **ready selling articles** if they will order a supply and show them to the neighbouring Physicians.

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Both at their first attempt.

Intending Students are advised to communicate early, as there are very few vacancies.

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PIESSE'S ART OF PERFUMERY

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12

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" W. S. GILL	" J. R. DAVIES
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During the vacation extensive alterations were made to meet the requirements of the New Schedule. The accommodation and appliances of the Chemical Laboratory were increased, a Pharmaceutical Laboratory constructed, and provision made for practical microscopic work in Botany and Materia Medica, and it is highly gratifying to the Principal that the results of the October Examinations, the first under the new regulations, so fully justify these changes and advances—9 out of 12, or 75 per cent., of our candidates passed!

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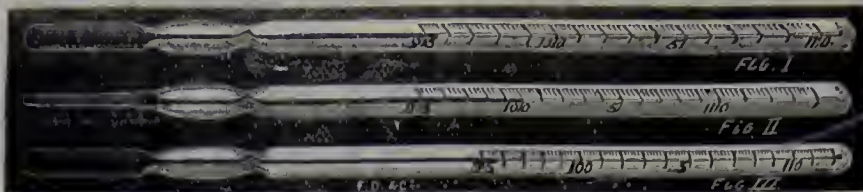


Fig. 1.

Fig. 2.

Fig. 3.

Hospital Pattern, in German Silver Cases	21/	per dozen.
Standard do., Fig. 3	"	"	or Vulcanite	27/	"
Lens Front do. Fig. 1	"	"	"	...	...	...	...	...	...	54/	"
Do., rapid action, by which readings can be taken in as short a time as 30 seconds, Fig. 2	...	...	...	...	...	...	...	...	...	66/	"

We beg to caution our clients against buying spurious imitations of our well-known goods.



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Chemists commencing the Spectacle business will find these Show Cases arranged with an assortment of Spectacles and Folders of all sights, to meet the requirements of purchasers. The quality and quantity may be varied to suit any class of trade at customer's wish. Case is of Solid Polished Mahogany, well made and finished, to stand any climate. A large Coloured Show Card is sent with each case, and instructions for testing sights, with table of Nos., and together with Sight Tester, £2 2s; do, with assortment of Folders and Test Types, £3 3s.; Large-sized Case, with more complete assortment, £6 6s; do, with assortment of Pebble Spectacles, £10 10s.; Large-sized do., £21.

The following Trade Lists now ready: "Spectacles and General Optics," "Meteorological Instruments," "Electric Bells Medical Batteries, &c.," mailed Free to any part of the World.

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DO NOT LET the FANCY SHOPS & STORES TAKE THE WIND OUT OF YOUR SAILS!

THOSE WHO AGREE WITH FEW REMARKS ABOVE, KINDLY TAKE NOTE OF

SHIRLEY'S LINES SUITABLE FOR XMAS TRADE.

PERFUMERY (Etienne's).

Fancy Leaf and Flowers, with handle, holding Bottle of Scent, 6/6 doz.

Fancy Circles of Flowers, with tall, loop-handle, holding cut Bottle of Scent. A very pretty Xmas Present, 11/- doz.

Charming Stand, Hexagon-shape which unfolds, and contains 3 Prettily-cut Bottles full of good Scent, 17/- doz.

Bound to Sell Readily.

6d. SACHETS, Assorted Coloured Silks, Gold Braided Edges, 4/- doz.

2d. Line, in Bottles, Attractively Capped, Carded, or Boxed, 1/3 doz.
3d. " " with Sprinkler ... 2/- "
6d. " Fancy Bottle, Cut, Prettily Tied with Ribbon ... 4/- "
6d. Round Essence, with Sprinkler ... 3/9 "
6d. Lundborg " Corked and Capped ... 3/6 "
1/- 1 cz.* " Stopped, Capped, and Tied with Ribbon 8/- "
2 " " " " " " " 13/- "
4 " " " " " " " 24/- "
* Buyers' own name on per 3 doz. lots of this series.

1/- Fancy Cut Bottle, Stopped, Prettily Tied ... 8/- "
1d. Sample Tubes (containing much more than 1d Bottles) 8/- gross
In Bulk, Triple Extract, 10/- per 20 oz } Attractive Easel Show Card
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Very Pretty Heart-shape China Bottle, Capped with Leather, and Perfumes.
with Hanging Silk Cord, Filled with Perfume, 7/3 doz.

Artistic China article, representing a Willow Pattern Plate, Filled with Perfume, with Hanging Cord, 12/- doz.

SOMETHING NEW!!

Châtelaine Purse and English Stopped Bottle, 10/6 doz.; ditto, smaller, 8/6 doz

The Stoppers of the Bottles in Purses cannot come out in the pocket.

A SOVEREIGN BOTTLE-PURSE, to Retail at 1/-. This is a Watch Bottle, with exact imitation, in Glass, of a Sovereign, fitted in a Purse—a really good article, 8/- doz.

6d. Purse and Bottle, 4/- doz.; 9d., 4/6 doz.; 1/-, with English Cut Bottle, 7/- doz.

VENETIAN GLASS BOTTLES.—Charmingly Decorated, Iridescent. A Few Pairs will make your Pharmacy lock very attractive.

No. 3529, 24/- doz.; No. 3497 Flask-shape, 22/6 doz.; No. 3559/2, Globe-shape, 27/8 doz.; No. 3528, Flask-shape, 26/- doz.; No. 36, Decanter, with handle, 35/- doz.; No. 3559/1, Globe-shape, 31/- doz.

PUFF BOXES.—Wood entirely hidden, outside being covered with beautiful Designs, 3-in., 3/9 and 4/- doz.; with Puff, 5/6 doz.; 3½-in., 7/- doz.; with Silk Puff, 9/- doz.

PAPIER MACHÉ BOXES.—No. 802, Gilt Japanese Design, 4/- doz.; No. 803, Floral Decorations, 5/- doz.; No. 803a, Inlaid Gilt and Colours, 5/9 doz.

CHINA BOTTLES with Nickel Caps, for Scent, No. 279, Watch, 4/- doz.; No. 280, Octagon, 3/6 doz.; No. 281, Watch, 3/6 doz.; No. 138, Tall-shape, 6/- doz.; No. 268, Egg-shape, 4/- doz.; No. 257, Fig-shape, 5/- doz.; No. 293, Pedestal-shape (Crown Derby Pattern), 8/9 doz.; No. 289, Watob, with Words "Eau de Cologne" in Gold across the Bottle, 8/6 doz.; No. 249w, Real Walnut Shell, with Nickel Cap Bottle, 4/- doz.

22/- worth of these China Bottles for 20/-, any assortment—only good Patterns Sent.

CHINA BOTTLES without Nickel Cap, for Perfumery, Salts, &c, 1 doz. assorted, in Glass Show Box, 6/- doz.

TOILET BOTTLES, ODORATORS, CUT-GLASS BOTTLES, ENGLISH CUT BOTTLES, &c., &c, in variety.

Order these Goods Assorted, and leave Assortment to us—satisfaction guaranteed. State Class of Bottles you require and Retail Prices, so as to guide us in Selecting.

ARTHUR W. SHIRLEY, 55 Farringdon Road, LONDON, E.C.

TOILET PAPER W. B. FORDHAM & SONS (LIMITED). TOILET PAPER

FACSIMILE OF LABEL.

Packets of about
500 Sheets,



2/-
per dozen Packets.
23/ per gross.

SPECIALLY PREPARED
REGISTERED
PINE **TISSUE**
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This Paper is highly recommended, being
Manufactured without the use of any
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The "Magic" Fire Lighter.

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Cleanest!!

Cheapest!!!

Ever

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A NEAT
LITTLE
BOX OF

ONE DOZEN

WHOLESALE PRICE.

8/ per gross Boxes any quantity. Sold from London carriage forward, or free Hull, Leith, Liverpool, Glasgow, and Newcastle, in lots of not less than 10 gross.

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KING'S CROSS,

TELEGRAMS—"FORDHAMS LONDON."

TELEPHONE, 7514.

ESTABLISHED 1828.

S. MAW, SON & THOMPSON'S CHEST PROTECTORS AND VESTS

For Shielding the Lungs.



FIG. 3.
Double, for the Chest and Back.

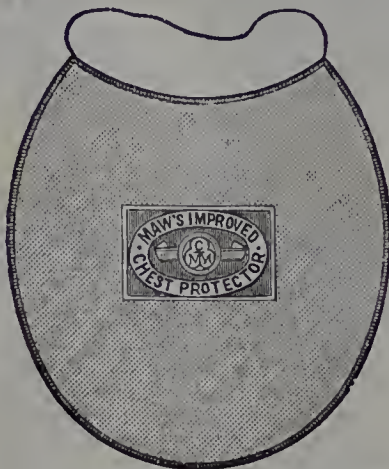


FIG. 4.
Single, Chest Protector.



FIG. 5.
Vest, a Shield for the Lungs.

CHAMOIS AND FLANNEL.

				No. 1	No. 2	No. 3	No. 4	No. 5
Fig. 3.	Double	...	per doz.	20/	26/	32/	39/	48/
	Ditto, perforated	...	"	24/	32/	38/	46/	54/
Fig. 4.	Single	...	"	9/	11/6	13/6	16/	20/
	Ditto, perforated	...	"	11/	14/	16/	19/	24/
Fig. 5.	Vests	"	"	27/	34/	42/	51/	60/

FELT, ASSORTED SCARLET AND WHITE.

				No. 1	No. 2	No. 3	No. 4	No. 5
Fig. 3.	Double, best...	...	per doz.	17/	22/	27/	33/	44/
	Ditto, second	...	"	14/6	19/	23/	28/	37/
Fig. 4.	Single, best ...	...	"	7/6	9/6	11/	14/	20/
	Ditto, second	...	"	6/6	8/	9/6	12/	16/
Fig. 5.	Vests, Scarlet	...	"	17/	22/	27/	33/	40/

FELT, NATURAL UNDYED WOOL.

				No. 1	No. 2	No. 3	No. 4	No. 5
Fig. 3.	Double	...	per doz.	18/	24/	30/	36/	50/
Fig. 4.	Single...	...	"	8/	10/	12/	16/	22/

SPECIAL QUOTATIONS TO WHOLESALE BUYERS.

S. MAW, SON & THOMPSON, LONDON.

EXCHANGE COLUMN.

Advertisements for the Issue of December 26 must be received not later than 5 p.m. on Tuesday, the 22nd instant.

TERMS.

Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of 1d. per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or if he pays 1d. per word, his name and address will be registered and a figure attached to his advertisement. All correspondence referring to that figure must be addressed to "The Publisher of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.," and the figure must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination. A price is counted as one word, as e.g., £1 10s. 6d.

DEPOSIT OF MONEY.—In order to ensure safety we offer the following system:—The purchaser of anything advertised in the Exchange Column may remit the amount to us, accompanied by a commission of 6d. if the amount is £3 or under; and 1s. if over that sum. We acknowledge receipt of deposit to both parties, and hold the money until we are satisfied that either the goods are returned to their original owner or the purchase is completed.

Postal orders and cheques sent as deposit must be made payable to Edward Halse, and crossed "Martin's Bank (Limited)."

FOR DISPOSAL.

Literature.

Pharmaceutical Journal, posted Mondays; what offers? Williams, Longflee, Poole.

Proprietary Articles.

Quantity of Lewis & Co.'s drenches, &c. Bond Smith, Potton.

Two-and-a-half dozen each, Wilkinson's Magic Drops, 4s. 6d. size, 18s. per dozen; Astley-Cooper's Gout and Rheumatic Pills, 1s. 1½d. size, 6s. per dozen; all clean and good. Hinton, 38 Bedford Street, Strand, London, W.C.

Formulæ.

Recipe for solution of cod-liver oil in ext. malt, perfect, permanent, 10s., sample 6d.; also cod-liver oil emulsion, perfectly white, thick cream, guaranteed permanent, 2s. 6d. Smith, 29 South Street, Liverpool.

Manufacture your own specialities.—A practical modern pharmacist will supply working formulæ at 10s. each (samples 3d. each, by post): Concentrated waters 1 in 40, solution cod-liver oil in extract malt (perfection), pepsine essence, pepsine wine, tasteless cascara cordial, soluble liquor santal co, soluble liquor podophyllin, liquor ferri iodide, ferri bromide, and ferri phosph., all 1 to 7 (all stable), or any other liquor supplied, mist bisanthi co. rub, chlorodyne miscible. Please state wants. Napier, 64 Hanley Road, Hornsey Rise, London, N.

Drugs and Chemicals.

Surplus stock.—Glycerine, guaranteed double-distilled, chemically pure 1-233, 6d. lb., Winchester's. Smith, Chemist, Hulme, Manchester.

Shop Fittings.

Two dentist's bent-glass show-cases, mahogany frames and carved tops, with zinc stands; very handsome; to be sold a bargain. 80/41. Job line.—Pear-shaped carboys: 8-gallon, 20s.; 6-gallon, 15s.; 4-gallon, 12s. 6d.; 3-gallon, 10s.; 2-gallon, 7s. 6d.; pair specie-jars, Royal arms, glass, gold covers, 29 in. equal to new, 75s.; smaller sizes from 7s. 6d. Natali, 18½ Aldersgate Street, London.

Shop-fittings, second-hand, for sale, cheap: range of drawers, shelves, and lockers, 12l. 10s.; glass-fronted counter, dispensing-screen, sponge-case, bottles, carboys, specie-jars, counter and wall cases, and other fittings. Philip Josephs, 54 Old Street, Goswell Road, London, E.C.

Miscellaneous.

Quantity of chemical apparatus; particulars. Bond Smith, Potton.

Water-hed: full size; Maw's price. 8l.; price 4l.; only used once. Hulme, 37 Amhurst Park, N.

Microscope, compound objective 1-in., ½ in., and ¼ in., fine and coarse adjustments, mahogany case, 35s. Ritson, Chemist, Carlisle.

Male urinal; double chamber; day and night use; never worn; 15s. "Instrument" Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

Copper steam-jacketed evaporating-pan, 7 feet diameter; copper still, 100 gallons heated by gas. Bennett, Sons & Shears, 167 Kingsland Road, N.E.

Surplus stock—1 lb. pulv. opii ture, 11s.; 2 lbs. potass. iodid, 10s. lb.; 5 lbs. ess. bergamot, 3s. lb.; 1,000 sandal-oil capsules, 23s. J. C. Lingdale, Skelton, R.S.O.

A Gibson's mercer's-ointment mill, large size, in thorough good order. Applr, A. B. c/o Willows, Francis & Butler, 101 High Holborn, London, W.C.

Pure English honey, excellent colour and flavour, about 2½ cwt., 8d. per lb., packages free, carriage forward, cash with order; genuine beeswax, 1s. 6d. per lb. Brampton, Sudbury, Suffolk.

For Sale, second-hand.—Tincture-press (small), screw and hydraulic combined; centrifugal (small), 8-in. gun-metal basket, suit school; warehouse crane, 4 ft. jib, windlass, fast and slow motion; pump (lift and force) on wood plank, 3½ in. gun-metal barrel, Copper Works, 8½ New R.I., Whitechapel, E.

WANTED.

Air or water bed: cheap. Orchard, Salisbury. One or two grain pill-machine. Earle, Chemist, Hull.

Loft's check-till, in perfect condition; lowest price. Gaitskill, Gosforth, Carnforth.

Small size rotary pill-machine, for making two and three grain pills; also piping-press to match. Herbert, Uttoxeter.

"MYRTLE GROVE" TOBACCO

In 1-oz., 2-oz., and 4-oz. Packets, and ½, ¾, 1 lb, Tins only.

TADDY & CO., 45 Minories, LONDON

ESTABLISHED 150 YEARS.

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Write for List of Specialities.



TELEPHONE NO. 5415.

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THOMAS TYRER & CO.

STIRLING CHEMICAL WORKS, ABBEY LANE, STRATFORD, LONDON, E.

ESTABLISHED 1844.

Manufacturers of PURE CHEMICALS for

PHARMACY—PHOTOGRAPHY

(GUARANTEED TO ANY OFFICIAL OR REQUIRED SPECIFICATION.)

TRADE



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Director of Laboratories:—THOMAS TYRER, F.I.C., F.C.S.

AMMONIUM.
AMYL.
BARIUM.
IRON.

ACETATES

LEAD.
POTASSIUM.
SODIUM.
ZINC.

PYROXYLIN

PURE
COLLODION
METH.

ETHER.**MERCURIALS.**

CALOMEL.
RED OXIDE.
PILL.

PURE

SUBLIMATE.
WHITE PRECIPITATE.
OINTMENT.

AND ANY OTHER REQUIRED MERCURIAL PREPARATION.

PHOSPHORIC ACID,

DIL., CONC., SYRUPY, & GLACIAL. Free from Arsenic, Lead, &c.

IRON AMMON CITRATE
BISMUTH AMMON CIT.
IRON CITRATE TRUE

**SCALE
PREPARATIONS.**

IRON POTASS. TART.
QUININE AND IRON CIT.
STRYCHNINE CITRATE

SPIRIT NITROUS ETHER, B.P., & AROMATIC AMMONIA, GUARANTEED

WHOLESALE ONLY.

PURE BEEF CO.'S PREPARATIONS.



The attention of all Chemists, Medical Men, &c., is directed to the above preparations, which are guaranteed to be made in England from Pure Beef only. Full particulars and samples sent free on application to

THE PURE BEEF CO., 5 WATER LANE, GREAT TOWER STREET, LONDON, E.C.

**ESSENCE OF BEEF
CONCENTRATED BEEF TEA
CLEAR BEEF STOCK
THICK BEEF STOCK
EXTRACT OF BEEF**

**DESICCATED SOUP
BROLE, a Powdered Beef Extract.
BROME, a Powdered Thick Stock.
Concentrated BEEF à la Mode
MEAT LOZENGES**

NOTE GENUINE WITHOUT THE

TOWER TEA

HIGHEST AWARD, PARIS, 1889.

Analysts by the "LANCET," December 20th, 1890:—

"We have submitted to examination the Teas of the Great Tower Street Tea Company (Limited). They all yield liquors which are generous to the taste, and of full strength and vigour. The results of our analysis indicate the purity and genuineness of the samples."



REGISTERED TRADE MARK.

Where Vacancies exist, Agencies are appointed by



PRIZE MEDAL, PARIS, 1889.

THE GREAT TOWER STREET TEA CO., LIMITED

5 JEWRY STREET, LONDON, E.C.

DENAAYER'S PEPTONOIDS

AND EXTRACT OF

118 BISHOPSGATE ST.

MEAT COMPANY, LIM.,

WITHIN, LONDON, E.C.

TELEGRAPHIC ADDRESS "DENAAYER LONDON."

DISCRIMINATE FOR YOUR CUSTOMERS!

between the fictitious nutritive value of such invalid foods as are mainly composed of Gelatine or the extractive matters of meat, or both, as many so-called peptones, meat essences, &c., are, and the true

STRENGTH OF MEAT,

which is not yielded by its GELATINE nor by its EXTRACTIVES, but by the ALBUMINOID matters it contains, and which, by Denaayer's process, are dissolved and converted by pepsine into a delightful and elegant preparation.

See THE LANCET, May 2nd; HOSPITAL GAZETTE, June 5th; CHEMIST AND DRUGGIST, April 16th; ANALYST, May 1st. upon Mr. Denaayer's new method for the Analysis of Peptones, whereby the gelatine is capable of determination, whereas this body has hitherto been unavoidably included with peptone albumose by analysts.

Description will best be appreciated with the articles before you, therefore you are invited to send for a free sample of

DENAAYER'S STERILIZED PEPTONE OF MEAT (2/- per bottle, ready for use).

DENAAYER'S LIQUID PEPTONATE OF IRON (1/6 per bottle).

PULVIS FERRI PEPTONATIS (Denaayer), 4/- per ounce.

PEPSINA PORCI (Denaayer), 3/- per bottle, one-third of an ounce.

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FOR SCOTLAND—EDINBURGH: Messrs. Duncan, Flockhart & Co.; **GLASGOW:** Old Apothecaries' Co., Lim.

FOR IRELAND—DUBLIN: Messrs. Hamilton, Long & Co., Lim.; **BELFAST:** Messrs. Grattan & Co., Lim.

EIGHT PRIZE MEDALS AWARDED.

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YORKSHIRE RELISH.

Most Delicious Sauce in the World. Bottles, 6d., 1s., and 2s. each

GOODALL'S BAKING POWDER.

The Best in the World. 1d. Packets; 6d., 1s., 2s., and 5s. Tins.

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One 6d. Tin is equal to 25 eggs. In 1d. Packets; 6d., 1s., 2s., and 5s. Tins.

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Delicious Custards without Eggs. In Boxes, 2d., 6d., and 1s. each

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Delicious Blancmange in a Few Minutes. Boxes, 6d. and 1s. each.

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Best Tonic yet Introduced. Bottles, 6d., 1s., and 2s. each.

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Makes the Best Ginger-Beer. Packets, 3d. and 6d.

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For Painting Stoves, Grates, Iron, Tin, &c. 6d. and 1s. Bottles.

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A Rich and Lasting Perfume. Bottles, 1s., 2s., and 5s. each.

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Make a Delicious and Nutritious Jelly. In ½-pint, 1-pint and Quart Boxes, 3d., 6d., and 1s. each.

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GOODALL, BACKHOUSE & CO., LEEDS.

GEO. MASON & CO.'S ESSENCE OF BEEF.

HOSPITAL FOR CONSUMPTION, BROMPTON.

Order No. 1080.
"Please supply 120 tins Mason's Essence of Beef as before."

"Please send at once 3 Gross Mason's Essence of Beef."

ST. MARY'S HOSPITAL, PADDINGTON.

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"O.K." BOUILLON.

The "O.K." Bouillon is the best and cheapest Beef Tea ever put before the public. It is made in England from British Beef. It can be sold as low as 6d. per tin.

CONCENTRATED BEEF TEA, MEAT LOZENGES.

MASON'S MALTED FOOD FOR INFANTS.

PRICE LISTS POST FREE.

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FACSIMILE OF TIN.

Chemists wishing to push their own name will find this package very suitable. The name and address sent must be printed, to avoid mistakes; will be ready for delivery within a week of receipt of order.

In Gross Parcels only through the Wholesale or direct, with your Name and Address, and Carriage Paid, on receipt of Postal Order, 25/-

Or can be had through the Wholesale in 3 dozen boxes, without name and address, at 25/- per gross.

JAS. PASCALL, MANUFACTURING CONFECTIONER
VALENTINE PLACE,
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AND APPLIANCES
BRATBY & HINCHLIFFE LTD
ANCOATS 146 MINORIE'S
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All our Seltzogenes are manufactured on the well-known "Fevre" System, and each one is thoroughly tested before leaving the works.



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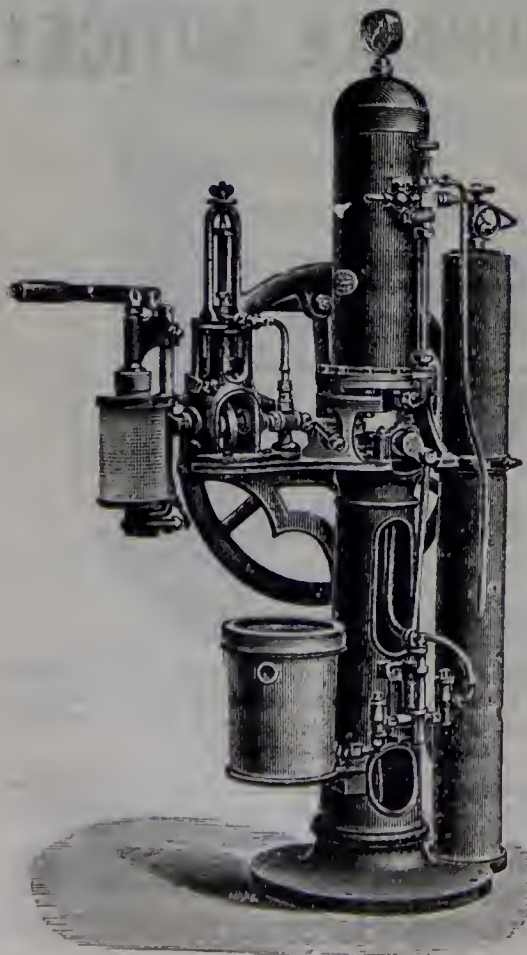
SYPHONS — 1/6 1/8 and 1/10 each.

SELTZOGENES.

1	2	3	4	5	8 pint.
5/6	8/2	7/	8/	9/11	15/6 each.

SODA WATER MAKING

WITH
LIQUEFIED CARBONIC ACID GAS.



The No. 1 "Compact" Machine, specially designed for Chemists and Hospitals, and can be used for either Syphons or Ball-stoppered Bottles

Producing capacity, by hand power, 60 dozens per hour.

Ditto, for steam power, 120 dozens per hour, with extra filling machine.

PRICE £60.

The No. 2 "Compact" Machine (as shown), made on the same principle, but smaller in its capacity.

Producing capacity, by hand, 25 dozens per hour.

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PRICE £48.

Iron Vessel containing an average of } 10s.
28 lbs. by weight of Liquefied Gas ... } each.


And has sufficient Gas to manufacture about 20 gross Soda Water (10 oz. Bottles), or from 3,000 to 4,000 draughts from the Counter Fountain.

A Charge of £3 is made for the Iron Vessel, but when returned, the full amount is credited.


Send for Catalogue, giving complete information. Forwarded free upon application to

BARNETT & FOSTER,
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PURE ESSENTIAL OILS



WE desire to draw the especial attention of the Trade to the numerous additions of **ESSENTIAL OILS** of exceptional quality recently made in our Price List.

For some time past we have endeavoured to produce qualities of Essential Oils greatly superior in character to anything previously placed upon the market, in order to supply the natural want of those consumers whose sole object is to obtain articles of exceptionally fine quality irrespective of price. To obtain our desire we have thoroughly studied the methods of cultivation and production, with the result that we are now offering Essential Oils excelling in all the necessary qualities—pungency, strength, and aroma.

WE APPEND A LIST OF THE OILS ABOVE ALLUDED TO.

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OIL ANISEED.

„ CARAWAY, from selected English Cultivated Seeds.
(The quality usually sold as English is drawn from Dutch Seed.)

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„ CEDAR WOOD.

„ CINNAMON, from the Finest Selected Bark.

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(The quality usually sold as English-drawn is from the German Seed.)

OIL CUBEBS, from selected Cubebs freed from stalks.

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OIL CAMOMILES.

„ LAVENDER.

„ PEPPERMINT, from White and Black Plants.

OIL SPEARMINT.

„ VERBENA.

Drawn at our Works at GRASSE.

OIL LAVENDER, from Cultivated Plants, and doubly rectified.

„ NEROLI.

OIL PETIT GRAIN.

„ ROSEMARY, from Cultivated Plants.

„ THYME, from Cultivated Plants.

Manufactured at our Works at SICILY.

OILS LEMON AND ORANGE, absolutely pure, and from selected Fruit.

OIL BERGAMOT, from sound and selected Fruit, absolutely genuine, produced at our New Works, San Ferdinando, Calabria.

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And is sold in bottles, authenticated by a Government Stamp bearing their Names. Trade Mark, "Henry's Calcined Magnesia."

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CHININFABRIK AUERBACH

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SULPHATE OF QUININE

And all other Cinchona Preparations.

STOCK KEPT IN LONDON.

Certified by Professor Fresenius, of Wiesbaden, as equal to the best preparations of other marks.

THE FACTORY SUPPLIED THE
AMERICAN, RUSSIAN, and DUTCH GOVERNMENTS
DURING LAST CRISIS.

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SOLE AGENT,
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THE ONLY GENUINE MINT ALCOHOL IS

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Recommended by the highest Medical Authorities for Indigestion
Stomach Ache, Heartburn, and Headache. It dispels immediately
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53 AWARDS, of which 15 are Diplomas of Honour & 14 Gold Medals
DEPOTS EVERYWHERE.

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METHYLENE.

Obtained by the action of Metallic Zinc on
Chloroform and Alcohol.
Discovered to be a general Anesthetic by Dr.
RICHARDSON in 1867.

Bottles. 16s.; 8-oz., 8s. 6d.; 4-oz., 4s. 6d.; 2-oz.,
2s. 6d.

COMPOUND ANÆSTHETIC ETHER.

For producing Local Anæsthesia
In 6-oz., 10-oz., and 20-oz. Stopped Bottles, 2s., 4s., and 7s.

OZONIC ETHER.

In 3-oz., 4-oz., 8-oz., and 16-oz. Stopped Bottles, 2s., 3s. 6d., 7s., and 12s.

PEROXIDE OF HYDROGEN.

First introduced as a Medicine by Dr. RICHARDSON.

ETHYLATE OF SODIUM

Dr. RICHARDSON'S Formula, for removing Nævi, &c. In 4-oz. &
Bottles, with elongated Stoppers for applying the Caustic 2s. 6d. &
4s. 6d.

EPTIC COLLOID.

For promoting the Healing of Wounds by the first intention
In 2-oz. and 4-oz. Bottles, with Brush, 2s. 6d.,
and 4s. 6d.; 16-oz., 12s.

CHARCOAL CAPSULES

Containing Pure Vegetable Ivory
Charcoal.
In Boxes, 2s. 6d. each.

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OXFORD ST. 147

TYRER'S GOOD 1^{D.} LINES.

CHEMISTS SAVE TIME AND MONEY

By selling my "Plain Label"* Lines. Should remit prices quoted for sample $\frac{1}{4}$ -gross lots. If not satisfactory, I will pay carriage back, and return cash.

*PENNY MENTHOLS.

On $\frac{1}{4}$ -gross Cards... Per gross 5/6 and 6/6

*PENNY (Tasteless) PILLS.

6 in a box, $\frac{1}{4}$ -gross Cards... 4/6

SPECIAL NEW LINE.

*PENNY (Tasteless) PILLS.

6 Pills in Glass Tubes, $\frac{1}{4}$ -gross Cards... 5/6

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Black Teats, fitted complete with Shield, Union, and Cord, on $\frac{1}{4}$ gross Cards at 7/-; this is a good line, and sells freely.

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With Wool complete, $\frac{1}{4}$ -gross cards... Per gross 5/6

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On $\frac{1}{4}$ -gross Cards... 5/6

*WORM CAKES (Gingerbread).

As supplied to the largest houses in London. Per lb.
1-lb. tin (tins free), 60 to the lb. ... 1/2
 $\frac{1}{4}$ -gross tins ... Per gross 4/6
* The "SWEETMEAT" WORM CAKES, 1d. each. ... 6/-
 $\frac{1}{4}$ -gross tins ...

*FULLER'S EARTH POWDER.

1d. Boxes, in $\frac{1}{4}$ -gross glass top boxes ... 3/6

*VIOLET POWDER.

1d. Boxes, in $\frac{1}{4}$ gross glass top boxes ... 4/-

*GOLD BEATER'S SKIN.

1d. Packets, on $\frac{1}{4}$ -gross cards ... 3/6

*COURT PLASTER.

1d. Packets, on $\frac{1}{4}$ -gross cards (Black, White, or Pink) ... 4/-

TOOTH ENAMEL.

(Gutta Percha Enamel for Stopping Decayed Teeth.)
1d. Packets, on $\frac{1}{4}$ -gross cards ... 4/-

For sums under £1 please remit Postal Order, not Cheque, and oblige,

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IN FOUR VARIETIES.

BROWN—Beef and carefully selected garden Vegetables.

GRAVINA—EDWARDS' Gravy Powder.

WHITE VEGETABLE—A purely Vegetable preparation.

DESICCATED SOUP—Tomato—Containing all the valuable, agreeable, and health-giving properties of the fresh Tomato, perfect and unimpaired.

Registered Trade Mark—"DESICCATED SOUP."

Sold by all respectable Grocers, &c. Cookery Book, post free.

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As supplied to the Admiralty, War, and India Offices.

1-lb. Jars..... per lb.	6/9	per doz.	81/0	2-oz. Jars..... per lb.	7/8	per doz.	11/6
$\frac{1}{2}$ -lb. Jars.....	7/0	"	42/0	1-oz. Jars.....	8/4	"	6/6
$\frac{1}{4}$ -lb. Jars.....	7/3	"	21/9	$\frac{1}{2}$ -oz. Jars.....	8/8	"	8/8

QUOTATIONS FOR EXTRACT IN "BULK" ON APPLICATION.

Write for Detailed Price List to the Australian Meat Co., 9 and 11 Fenchurch Avenue, E.C.

8 lbs. Carriage free.

Winter Wants.

Another Season's trade is approaching. Already there are indications of a rigorous winter. The mornings are raw and cold, evenings chilly, and winds biting. None know so well as Chemists and Druggists the intimate relation between the barometer and health. Bad weather means various things; some of them we give quotations for on this page, with this brief hint: We are in the best position in the world for supplying the best goods, at the best prices, and on the best terms. We employ no Travellers, and give our Customers the advantage of the saving in expenses.

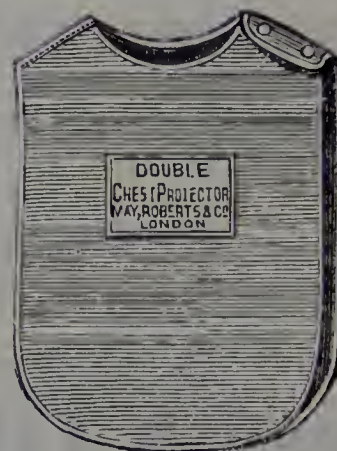
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Grey Felt. NATURAL WOOL.
BEST QUALITY. BOUND WITH SILK.



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Size—	8½ × 7½	9½ × 8½	10½ × 9½	11½ × 10½
Per doz.	4/8	6/	7/9	9/3
				11/

For Prices of
SCARLET FELT
see
Price List.



DOUBLE.				
Nos.	1	2	3	4
Size—	11 × 8	12 × 9½	13½ × 11½	16½ × 14 in.
Per doz.	15/	18/	22/	36/



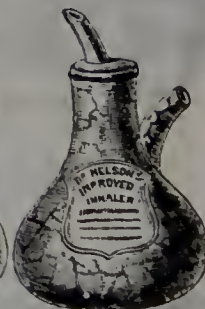
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Oval, in Tin, 5/8 and 6/3. Cheaper kinds, 1/10 and 2/4.

HOT-WATER



BOTTLES.

3/7 to 8/ each.
Scarlet covers, 1/ to 2/ extra.



Plain White, 1/9.
Marbled.... 2/.

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CAMPFORATED GLYCERINE ROLL—In ½ and ¼ gross glass-top boxes 1d., 5/; 2d., 9/6 per gross.
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GLYCERINE JELLY—M. R. & Co.'s 6d. bottles, 2/6 per dozen.

GUTTA PERCHA (for Stopping Teeth)—In boxes containing 12 sticks, 14/ per dozen boxes.
Each stick in gold paper case, 1/9 per dozen box.
1d. squares, neatly wrapped, 2/6 per gross.
4-oz. sheets, 3/.

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LIP SALVE—Rose or White, in push-up cases, in 1-doz. glass-top outers, 2/2 per dozen.

PLASTERS of all kinds, on paper, calico, swan-down, leather, &c., porous or otherwise. See Price List, pp. 46-47.

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AT SPECIAL TERMS FOR CASH.

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ADVERTISEMENTS APPEARING IN THIS ISSUE OF "THE CHEMIST AND DRUGGIST."

NOTE.—The Folios shown in this Index are those at the FOOT of the Page, and not at the Top. This arrangement is necessary in order to meet the requirements of the Post Office.

Foot of Page	Foot of Page	Foot of Page	Foot of Page
Allen & Hanburys..... 5	Eade's Pills 62	Lakeman, J. J. 65	Radams' Miorobe Killer Co. (Lim) 43
Andrews Bros. 63	Easy & Co. 52	Layng, R. O. 63	Reade Bros. & Co. 64
Ap'o Linaris, The, Co. Cover	Elliman, Sons & Co. Text 878	Lennon, B. G., & Co. 42	Ricqlès & Co. 24
Ambrecht, Nelson & Co. 47	Evans, Sons & Co. 6, 24, 44, 57, Cover	Levermore, A., & Co. 62	Robbins, J., & Co. 24
Australian Drug Co. 40	Evans, Lescher & Webb, London	Levy, Julius 42	Robinson & Sons 54, 63
Australian Meat Co. 25	6, 24, 44, 57	Leo & Co. 31	Rocke, Tompsitt & Co. 42
	Evans and Sons (Lim.) 6, 24, 44, 57	Liquor Carnis Co. (Lim.) 31	Rosmarine Manufacturing Co. 9
	Exchange Column 18	Liverpool School of Pharmacy 12	
		Llewellyn, J., & Co. 43	
Balm of Bethesda Co. 62	Fallowfield, J. 14	Lofthouse & Saltmer 38	Salvine, The, Co. 51
Barclay & Sons (Lim.) 53	"Fame" 13	London Homœopathic Hospital and Medical School 12	Sanger & Sons 50
Barker, W., & Son Text 878	Fink, F., & Co. 62	Lynch & Co. Cover	Sanitas, The, Co. (Lim.) .. Text 878
Barnett & Fester 22	Fitch & Nottingham 63		School of Pharmacy, The 12
Barrett, R. H. 52	Fletcher, Fletcher & Stevenson 62, 63, Text 878		Seabury & Johnson 65
Beaulette Co. 53	Fordham, W. B., & Sons (Lim.) 16	Marion & Co. 34	Sequah (Limited) 45
Beecham, T. 45	Fuerst Bros. 36, 38	Mason, G., & Co. (Lim.) 21	Shiphoff & Co. 53
Benham & Froud, Lim. 8		Maw, S., Son & Thompson 10, 11, 17, 55	Shirley, A. W. 15
Berger, F. 8	Gardner, W. 56	May & Baker (Limited) Cover	Silicated Carbon Filter Co. Text 878
Bersley, J. 62	Gent & Co. Text 878	May, Roberts & Co. 26	Silverlock, H. 13
Bishop, A., & Sons 46	Globe Chemical Co. 63	Millar, A., & Co. 25	Smith & Sons 43
Blondeau & Cie. 66	Goodall, Backhouse & Co. 21	Morison's Pills 62	Smith, S., & Co. 60
Boehm, F. 24	Greiff, R. W., & Co. 10	Moryoseph, A. 63	Smith, T. & H., & Co. 38
Boord & Son 60	Greensill, T. S., & Son 63	Moseley, D., & Sons 8	Snowdon, Sons & Co. 7
Bows, Dr., Liniment 52	Grindley & Co. 5	Moss, J., & Co. Text 878	Solport Bros. 21
Bowling & Govier 58	Gt. Tower St. Tea Co. 20	Murdoch, J., & Co. 33	Soul, W. H., & Co. 40
Bratty & Hinchliffe (Lim.) 22	Guy's Tonic 43	Muter, Dr. 12	Spratts' Patent (Lim.) 61
Brett, F. J. Coloured Supplement	Hargreaves, Dr. 12	Natali & Co. 62	Stern, G. & G. 45
Brooks, T. 12	Harker, Stag & Morgan 44	Natali, E. 58	Stevens, P. A. 62
Burroughs, James 60	Hatriek & Co. (Lim.) 9	Newbery, F., & Sons 52	Sutton, W., & Co. 52
Burroughs, Wellcome & Co. 10, 33, 34	Hearn, E. A., & Co. 56	Nortern School of Pharmacy 12	
Bush, W. J., & Co. 23	Henry, T. & W., & Co. 24		Taddy & Co. 18
Bygrave, J. & W. 58	Heischell, G. 12		Tenfel Memorial Appliances Co. 44
	Holloway's Pills 52		Thompson, Walters, Hole & Co. (Lim.) 59
Calbury Bros. Cover	Hooper, W., & Co. Cover		Timbury's Encalyptus Oil Co. 43
Christy, T., & Co. 63	Horn & Son t2	Oftinger, E. 62	Townsend, J. 13
Clark, S., & Co. 55	Horn & Son t2	Ogden, T. (Lim.) 30	Tyrer, P. 25
Clements, S. G., & Co. 63	Ibris & Co. 62	Oldfield, Pattinson & Co. 31	Tyrer, Thomas, & Co. 19
Critchley, T. 63	Isaacs, I., & Co. 56	Oppenheimer, Son & Co. (Lim.) 31	
Crown Chemical Works 7	Jewsbury & Brown 53	Pascall, J. 21	Vaccine Association 53
	Johannis Springs (Lim.) 34	Paul's, Dr., Manicure 50	Van Hargan, J. 65
	Johnson & Jorgensen 56	Peake, Allen & Co. 43	Vogeler, The Charles A., Co. 32
Darton, F., & Co. 14	Kay Bros. (Lim.) 46	Pears, A. & F. 35	
Day & Sons Text 878	Keith, B., & Co. 43	Perry & Co. (Lim.) 42	Watson, W., & Sons 62
Day, Son & Hewitt 64	Kemphorne, Prosser & Co. 43	Philips & Co. 60	Watson & Wates 63
Dee Oil Co. (Lim.) 8	Kilner Bros. 61	Pierre & Lubin 12	Wilcox & Co. 49
Deneayer's Peptone Co. 20	King, F., & Co. (Lim.) 25	Powell & Barstow 62	Wood, V. 50
De St. Dalmas & Co. 42	Kuhn, B. 44	Prosser, Taylor & Co. 41	Wright, Layman & Umney Text 878
Dinneford & Co. 48		Pure Beef Co. 20	Wright, W. V., & Co. 34
Downie B. I. P. Co. 48		Pyn-ka Syndicate (Lim.) 53	Wylays & Co. 32, 60
			Youldon, E. 56

CLASSIFIED LIST OF ALL ADVERTISERS

Whose Announcements appear in "THE CHEMIST AND DRUGGIST." Those whose Names do not appear above are published in one of the other issues of this month.

ABETD & MINERLS Apolinaris Co. Barnett & Foster Chemists' Aserated Waters Association Ellis & Son (Ruthin) Franz Joseph Co. Geroldstein Hassall & Co. Hay, W. Iris & Co. Ingram & Boyle Jewsbury & Brown Johannis Spring (Lim.) Mills & Co. (Bourne) Mehsch, W., & Co. Schweppe, J., & Co. Wilcox & Co.	ACETIC ACID Fuerst Bros. Greiff, R. W., & Co. Morris & Callard (Salts)	BISMUTH PREP. Hearon, Squire & Francis Hewlett & Sons Howards & Sons May & Baker (Lim.) Symes & Co. Tyrer, T., & Co. White, Alfred, & Sons Davis, J. "Fame" Hargreaves, Dr., M.D. Herschell, G. Longmans, Green & Co. Mawson, Swan & Weddell Muter, Dr. Pierre & Lubin Wills & Wootton	BUTTER COLE, & Co. Gildfield, Pattinson & Co.	CHEMICALS Boehm, F. Fuerst Bros. Bowman, Thompson & Co. Bramwell, E., & Son Brunner, Mond & Co. (Lim.) Fletcher Fletcher & Stevenson Goodall, Backhouse & Co. Greiff, R. W., & Co. Hill, A. S., & Son [Clarke] Hodgkinson, Treacher Howard & Son (Pharm.) Kuhn, B. Levermore, Aug., & Co. Lofthouse & Saltmer Lorenz, H. May & Baker (Lim.) Morris & Callard Moss & Co. Reade Bros. & Co. Smith, T. & H., & Co. Stern, G. & G. (Pamline) Tyrer, T., & Co. Washington Chemical Co. Whit, A., & Sons Zimmermann, A. & M.
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AGENCIES ABROAD Acad, Ed. Australian Drug Co. Cocking & Co. (Japan) Fulton, Grimwade & Co. (Melbourne) Franz Josef Co. Fougera & Co. (New York) Kempthorne, Prosser & Co. Lennon, B. G., & Co. [(N.Z.)] Lary, Jules Llewellyn, J., & Co. Mardoch, John, & Co. Peake, Allen & Co. Prosser, Taylor & Co. Roberts (Paris, &c.) Rocke, Tompsitt & Co. (Mel-bourne) Sharland & Co. Soul, W. H., & Co.	AMMONIA Bowman, Thompson & Co. May & Baker (Lim.) White, A., & Sons Woolley, Sons & Co.	BOXES Anstin & Co. (Cardboard) Evans, Sons & Co. Farmanter, I. W., & Co. (Lim.) Robinson & Sons	CAPSULES (METALLIC) Betts & Co. Brooks, Peel & Co. Sanders, H. G., & Son	CHLORIDE OF LIME Government Sanitary Co. National Chemical Co.
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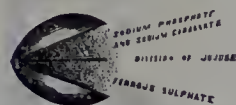
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Friendly Talks with the Trade.

THE old trouble, SUBSTITUTION, still obtains with a few Chemists, who do not realise that such malpractices generally result in moral suicide. It is a subject for sad contemplation when we find the morality and business aptitude of the Retail Pharmacist lower than that of an oyster-seller. The latter *does* appreciate the fact that, if he were to endeavour to palm off on the epicure *Blue Points* or *Dutch* when *Natives* are asked for, the act would not be satisfactory to the purchaser. Even so should it be with the Retail Chemist. Customers, when they inquire for "**TABLOIDS**" or **KEPLER EXTRACT OF MALT**, do not want anything else in place of them; although the vendor or dispenser may prevail upon the purchaser to take substituted products, he goes away dissatisfied. He was told, probably, by the physicians to take **KEPLER MALT EXTRACT**, and each time he takes a dose of Blank's it becomes more repugnant to him, and at last he resorts to another establishment to get exactly what he was told to take. He obtains it, and is satisfied. There is then no lurking suspicion in his mind that he is not being benefited by his treatment. The patient is improved in health, and Mr. Blank has lost a customer. Another point in the business practice of the oyster-man is worth consideration by the Retail Chemist. One generally finds the *Natives*, or best oysters, in a prominent position in the vendor's establishment; those bivalves of second-rate quality are only brought out when asked for. Let the Retail Chemist, whose returns are falling off, adopt the same plan. Keep those products of *first-class quality* and *good repute* well to the front, and introduce the others only when specially asked for. The former may, like Native oysters, cost a little more than the others, but they will give satisfaction to the customer, yield as much profit, and increase the monetary returns of the vendor.

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They are highly eulogised by the Medical and Pharmaceutical Press.

They afford a good margin of profit.

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KEPLER EXTRACT OF MALT,

KEPLER SOLUTION OF COD-LIVER OIL IN EXTRACT OF MALT.

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See Recommendatory Notice of Medical Press and Opinions of the leading Dermatologists.

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Extract from the Proceedings of the Royal Society of Edinburgh:—"Experiments on the Chief Disinfectants of Commerce, with a view of ascertaining their power of destroying the spores of the 'Anthrax Bacillus,' by a Medical Officer of Health and Public Analyst. A 10 per cent. solution of *Liquor Carbonis Detergens*, acting for four hours, distinctly retarded growth of *Anthrax*, for the spores, whether in gelatin-pork or in the broth, did not commence developing for 24 hours. Undiluted *Liquor Carbonis Detergens*, acting for four hours, arrested future growth."

The *Practitioner* of September, 1881:—"Eczema connected with varicose veins of the leg—also Pruritus Scroti, Labiorum, and Ani—is best relieved by weak tarry lotions, one of the best of which is *Wright's Liquor Carbonis Detergens*."

P. McLEOD, Colonel R.A., Inspector-General of Ordnance, Ordnance Office Madras, writes Sept. 10, 1887:—"I can certify that '*Liquor Carbonis Detergens*,' has cured me of a Psoriasis of 21 years, incurred in Burmah, after every effort of such an able skin doctor as Sir Erasmus Wilson had failed."

From the *Medical Times and Gazette*, Jan. 19, 1867:—"We have more than once called attention to the value of his remedy in chronic eczema."

From the *British Medical Journal*, Sept. 2.

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Supplied regularly to every member of the following Societies, who have adopted THE CHEMIST AND DRUGGIST as their official organ.

The Pharmaceutical Association of New Zealand.

The Pharmaceutical Society of Queensland.

The Pharmaceutical Society of South Australia.

Tasmanian Pharmaceutical Society.

Otago Pharmaceutical Association.

South African Pharmaceutical Association.

Literary Contents.

	PAGE		PAGE
Bankruptcy Reports	874	Editorial Comments (cont.)—	
Commentary	881	Cape Pharmacy Law	880
Corner for Students	864	English News	865
Correspondence:—		Floral Formulæ	871
The Drawback on Perfumery;		Foreign and Colonial News	869
The Vaseline Famine; Dis-		French Pharmaceutical News	868
covery of a Mydriatic Alka-		Gazette	882
loid in Lettuce; Disinfect-		Irish News	867
ants and How to Use them;		Legal Reports	873
Stokes's Liniment; Mr.		Manchester Pharmaceutical	
Fitch on Poisons; Inad-		Association	870
vertent Infringement; Our		Marriage	875
Christmas Fund	887	Medical Gleanings	884
Dispensing Notes	891	Personalities	872
Legal Queries	892	Reviews	877
Miscellaneous Inquiries	892	Scientific Mysteries	876
Deaths	875	Scientific Notes	883
Deed of Arrangement	875	Scotch News	867
Editorial Comments:—		Selected Poisoning Cases	882
The Pharmaceutical Society's		Trade-marks Applied for	871
New By-laws	878	Trade Notes	872
Drawback on Perfumes	879	Trade Report	885

THE SECRET OF SUCCESS.

OUR publisher has just prepared, in connection with the approaching Winter Issue of this journal, a rather clever four-page card. The front page of this is a representation of the doorway of our offices, 42 Cannon Street, London. Over the portal are the words, "*For the Secret of Success in 1892 Open the Door.*" On following this injunction (the glass doors being formed in natural style) one faces a crimson block, on which the following sage advice is displayed:—

Insert a handsome circular in the Winter Issue of THE CHEMIST AND DRUGGIST, and follow it with a series of effective advertisements.

In addition to this there are telling figures on the card to show how profitable the Winter Issue is to advertisers. Doubtless there are many of our subscribers who would like to see the card so as to adopt a similar style in their own advertising. To such our publisher authorises us to say that he will send a copy to any subscriber who sends a stamped and addressed envelope.

SUMMARY.

PLEASE read page 876, about "Scientific Mysteries."

WE publish an abstract of Mr. Sherlock's observations on floral formulæ.

OUR Obituary column contains notes on several chemists who have died recently.

PRINCE LUCIEN NAPOLEON has left a fine collection of elementary metals to the nation.

IN Dispensing Notes Mr. Millard offers a suggestion regarding the dispensing of bismuth and bicarbonate of soda mixtures.

IT will be noticed, from the announcement in the Corner for Students, that we offer a special prize for competition next year.

FRENCH pharmacists have found it necessary to discuss ways and means for preventing cutting. See our Paris Correspondent's letter.

THE Midland Counties Chemists' Association have discussed the idea of making every chemist within fifty miles around a member without paying.

MESSRS. BUSH have taken the opinions of Professor Attfield and Dr. Mejmott Tidy regarding the harmless effects of the small trace of lead in aerated water.

WE give in an Editorial article the features of the new Pharmacy Law now in force in Cape Colony. It is in some respects a remarkable advance on similar laws in other parts of the British Empire.

WE continue our remarks on the perfumery drawback proposals. Some of the perfumery houses in possession of bonded warehouse privileges say that our information is incorrect; but we cannot ascertain where we are in error.

THE Privy Council have sanctioned the new by-laws submitted by the Pharmaceutical Society, and they are now in operation. The subjects and fees for the qualifying examination are affected by these. Full details will be found in an Editorial article.

AT the meeting of the Liverpool Chemists' Association Dr. C. Symes delivered a valedictory address. From this we gather that the Association is in a sound condition, and that Dr. Symes is still desirous of having all chemists and druggists *de facto* members of the Pharmaceutical Society.

MR. KIRKBY discoursed on the microscopic character of drugs at Manchester, and to our report of his lecture is appended a speech by Professor Leech, in which that pharmacologist indulged in some speculations on the destiny of spurious drugs which find their way to Fenchurch Street Warehouse.

OUR Legal Reports include an appeal with regard to the "Britannia" trade-mark for soap by Hodgson & Simpson, the defendants voluntarily submitting to a perpetual injunction. A chemist has been fined in London for selling defective spirit of nitre, and an action has been raised in Scotland against a chemist in respect to the death of a dog said to have been poisoned by pills supplied by him.

IN our Correspondence columns will be found a number of useful letters this week. Mr. Fitch contests our remarks last week regarding his on the sale of poisons; the Cheshbrough Company have something to say regarding the vascline famine; Mr. F. B. Thornton disputes Mr. Dymond's priority regarding the discovery of mydriatic alkaloid in lettuce; Mr. Kingzett offers some remarks on disinfectants, and how to use them; and Mr. Allen explains further regarding his Kreat Halviva case.

NEXT WEEK.—Please note that advertisements for the Exchange Column in our next issue (Christmas week) must be in our hands by Tuesday evening, and that 5 p.m. on Wednesday next will be the latest hour at which we can receive advertisements for the Supplement.



CONDUCTED BY RICHARD J. MOSS, F.C.S., F.I.C.

SPECIAL PRIZE.

THE Proprietors of THE CHEMIST AND DRUGGIST offer a Special Prize, consisting of either Mendeleeff's "Principles of Chemistry" or Fresenius's "Chemical Analysis, Qualitative and Quantitative," to be awarded to the student who obtains the largest number of marks in the Corner for Students during the first six months of the year 1892.

QUALITATIVE ANALYSIS.

The subject of the next exercise in qualitative analysis will be a mixture of three salts. It is to be submitted to a thorough systematic examination; its constituents are to be detected, and all other substances proved absent.

Students' applications for portions of the mixture will be received up to Tuesday, December 22, and the samples will be forwarded immediately.

Students' reports will be received up to Saturday, January 2, 1892.

REPORTS.

The powder issued for the last competition consisted of 2 parts of copper sulphate, 1 part lead carbonate, and 1 part bismuth oxynitrate. The calculated composition of this mixture was:—

Bi	17.16
Pb	19.38
Cu	12.71
SO ₄	19.24
NO ₃	5.06
CO ₃	5.62
O	1.31
H ₂ O	19.52

100.00

The number of samples sent out was 72, and 34 reports have been received. That the exercise was a difficult one may be judged from the fact that only five students arrived at correct results. The greatest difficulty was experienced in the case of the nitric radicle, which eighteen of our correspondents failed to detect. Next in order of difficulty was the carbonic radicle, which thirteen students were unable to detect; then came bismuth and lead, which were pronounced absent by eleven students in the case of the former metal, and eight in the case of the latter. Copper and the sulphuric radicle were detected by all our correspondents.

One fruitful source of error in this analysis was the omission to separate the metals completely as sulphides by means of sulphuretted hydrogen. The three metals were capable of being precipitated by this reagent from an acid solution, and, as they constituted just half the mixture by weight, a good deal of the gas was required to effect complete precipitation. It is not difficult to tell when a sufficient quantity of the gas has been passed through the solution under examination. The solution should smell strongly of sulphuretted hydrogen when warmed and allowed to stand a short time. If it answers this test it may be filtered, and to make quite sure, part of the filtrate should be diluted, and more sulphuretted hydrogen passed through it. If the

solution now remains quite clear, it may be concluded that precipitation is complete. When the solution is not very acid the dilution with water may be omitted; but it is a desirable precaution. The object of it is to ensure that precipitation is not prevented by excess of acid; the precipitation of bismuth might readily be prevented in this way.

The decomposition of a bismuth salt by the dilution of an acid solution with water is a very characteristic test, but it fails altogether if there is a great excess of free acid present. This fact is easily confirmed by experiment. It must be remembered, too, that the reaction is best observed with bismuth chloride, and for this reason the solution, if it contains nitric acid, should be poured into a dilute solution of ammonium chloride, instead of pure water.

There is no excuse for the omission to detect the carbonate that constituted one quarter of the mixture. The effervescence of the powder with hydrochloric acid was quite unmistakable, and it was pure carelessness not to observe it. In analytical work nothing should escape notice—nothing should be too trifling for investigation.

PRIZES.

The First Prize for the best analysis has been awarded to G. H. ATHEY, Morpeth.

The Second Prize has been awarded to WALTER H. WAIND, 23 Cromwell Place, South Kensington.

Marks Awarded for Analyses:

G. H. Athey (1st prize) ..	100	Ozone	80
Walter H. Waind (2nd prize) ..	99	Zirconium	80
H. Bowden	98	Macedin	78
Moyhitt	97	C. N. A.	76
H. G. H.	93	A. J. Stones	75
A. P. Printier	95	C. E. Ashby	72
Probably	93	Vin de Coca	70
A. Blowpipe	93	J. Bircham	70
R. I. P.	92	Pepsine	67
Aloin	90	Bud	65
H. O. Thurland	90	H. F.	62
Amicus	88	Atom	60
Verdant Green	85	F. O. C. L.	60
Erbium	85	M. F. C. S.	58
Nitrobenzene	83	Sapientia	55
W. Hood	82	First Attempt	54
F. O. S.	81	F. H. F.	53

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half a guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

Note.—All communications should include the names and addresses of the writers.

A. P. PRINTIER.—The nitric reactions were too well marked to be attributed to a mere trace of the nitric radicle.

PROBABLY.—You ought to have detected the nitrate in the preliminary examination. A small portion of the powder heated in a dry tube evolved reddish-brown nitrous fumes.

A. BLOWPIPE.—The basic compound formed when an acid solution of a bismuth salt is added to water is most readily produced with the chloride, owing to the marked insolubility of the basic chloride. Hence the advisability of adding a chloride, such as ammonium chloride, to the nitric-acid solution before pouring it into water.

R. I. P.—You mistook the colour of the vapour evolved when the powder was heated in a tube; you ought to have been able to distinguish nitrous fumes from the vapour of iodine.

AMICUS.—You did not observe the effervescence caused by adding sulphuric acid to the dry powder in the preliminary examination, nor the subsequent effervescence when the portion insoluble in water was dissolved in hydrochloric acid. These important reactions ought not to have been overlooked.

VERDANT GREEN.—See remarks to "Amicus."

ERBIUM.—The irritating effects of various acid vapours are constant!

mistaken for the smell of acetic acid. To avoid an error of this kind it is desirable to make a compounding experiment with a known acetate, and compare the results obtained with those given by the unknown substance.

NITROBENZENE.—You have had to work under serious difficulties; a chemical laboratory ought to be a model of cleanliness and order. You omitted a summary of your results; it was by no means easy to find out what your final conclusion really was.

W. HOOD.—A quantity of lead sufficient to give a precipitate with hydrochloric acid as you describe was obviously more than a trace. The effervescence of the powder with the acid was quite unmistakable.

F. O. S.—See remarks to "Erbium." It is also very easy to mistake several odours for that of ethyl acetate, unless you take the precaution of experimenting on a known acetate for the purpose of comparison.

OZONE.—The coloured vapour you observed when the powder was heated in a tube, and which you described as yellow, consisted of nitrous fumes.

ZIRCONIUM.—With a considerable excess of nitric acid you might readily have failed to precipitate the bismuth as basic nitrate by the method you adopted. See remarks to "A. Blowpipe."

MACEDON.—The portion soluble in water contained copper sulphate, and when you mixed the aqueous solution with the acid solution which contained lead, lead sulphate was precipitated. This, no doubt, accounts for your failure to detect lead at a later stage.

C. N. A.—When a tartrate or citrate is heated the empyreumatic gases that are given off have always a burnt-sugar smell; this smell was entirely absent when the powder was heated.

VIN DE COCA.—When you obtain a black precipitate with sulphuretted hydrogen as a group reagent you cannot infer that those substances which give precipitates that are not black are absent. A light-coloured sulphide may be completely concealed by a sulphide of a darker colour. The portion of the sulphide supposed to be insoluble in nitric acid ought to have been further examined to see if it really consisted of mercuric sulphide.

PEPSINE.—Your evidence of the presence of arsenic was very inconclusive; much more definite results should be obtained.

H. F.—The precipitate produced on adding the aqueous to the acid solution of the powder was not due solely to bismuth; it consisted in part of lead sulphate. It would have been better to make a separate analysis of each solution.

F. O. C. L.—You failed to precipitate the metals completely with sulphuretted hydrogen, hence the black precipitate that you obtained in the filtrate with ammonium sulphide, and which you attribute to iron.

SAPIENTIA.—When the powder was heated with sulphuric acid there was no carbonisation, and the smell of burnt sugar was entirely imaginary.

FIRST ATTEMPT.—You ought to have detected such a large quantity of bismuth—the method you followed gave satisfactory results in the hands of other students; probably there was too great an excess of nitric acid in the solution that failed to give a precipitate with water. It is clear, however, that you did not completely precipitate the metals with sulphuretted hydrogen. See remarks to "F. O. C. L."

English News.

GAS-LIGHT STANDARDS.—The Board of Trade has resolved to appoint a committee to determine what the standard of light for testing the gas-supply of London should be, the present standard being unsatisfactory. Dr. E. Frankland, F.R.S., and Mr. Dihdin will represent the London County Council.

A GALAXY OF TALENT.—In these days of cheapness and keen competition it is gratifying to learn, writes our Birmingham correspondent, that some pharmacists have a *mens conscia recti*, for it is on record that a certain suburban business in this town has a staff consisting of four Major assistants and one of "minor" importance. This cannot be said of many houses, even though they be historic.

MIXED ON SYRUPS.—Our Birmingham correspondent told us an anecdote last week about a physician there who prescribed Easton's syrup with a view of administering arsenic in a convenient form. We have since received a companion sketch from a chemist in a fashionable watering-place. A physician there was attending a child of about six years of age, for whom he prescribed Fellows's syrup. A few days after, the father of the child, a chemist, meeting the doctor, alluded to the case, when the doctor asked, "Let me see, what is she taking now?" "The syrup of hypophosphites with quinine and strychnine." "But I did not order her that." "Yes; you ordered Fellows's syrup." "But that does not contain quinine and strychnine." Ascertain-

ing its composition, the physician substituted one of the pharmacopoeial syrups.

A "CABINET OF CHEMICAL ELEMENTS" was bequeathed to the English nation by the late Prince Louis Lucien Bonaparte, and the value of the contents was estimated for probate by Mr. G. P. Pond, chemist, of Fleet Street, at between 250*l.* and 300*l.* The cabinet contained sixty elements. Among the rarer kind may be mentioned beryllium, cerium, didymium, erbium, gallium, germanium, indium, iridium, lanthanum, molybdenum, niobium, osmium, palladium, rhodium, ruthenium, ruthidium, tantalum, tellurium, thorium, thallium, vanadium, yttrium, zirconium. There was a good sample of the purest gold; the iridium weighed 6 oz. troy; a splendid specimen of platinum weighing 4 oz. There was a fine sample of lithium. The Prince spent most of his time in his laboratory, and his wife the Princess worked with him, for she, too, was a great lover of chemistry. As she took up a bottle of phosphorus, admiring its beauty, tears came in her eyes at the thought of parting from such noble work to which she had so long been accustomed with the Prince.

NOTTINGHAM CHEMISTS DINE.—The Nottingham and Notts Chemists' Association held their annual dinner at the Masonic Hall, Nottingham, on December 9. Their President, Mr. Councillor Fitzhugh, who is also Mayor of Nottingham this year, was in the chair, and the Sheriff, the County Coroner, the Chief Constable, several doctors, and a large number of chemists, were present. Mr. W. H. Parker, the local secretary of the Pharmaceutical Society, responded to the toast proposed in its honour. "The Success of the Association" was proposed by Mr. W. J. Rogerson, of London, who said the Notts Association was, without doubt, one of the foremost in the kingdom, and spent eight-ninths of its income on education. Messrs. Parker, Wilford, and Gill responded. Mr. Beilby proposed "The Teachers of Classes." Professor Clowes, Dr. White, and Mr. Carr responded. Mr. George proposed "The Town and Trade of Nottingham," to which the Sheriff and Mr. Haywood responded. The Chairman proposed "The Medical Profession," for which Drs. Hunter, Roberts, and Mutch responded. Mr. Middleton proposed "The Visitors," for whom the Chief Constable and Messrs. Des Forges and Daniels replied. An excellent musical programme was also provided.

SUDDEN DEATH OF A CHEMIST.—On Wednesday Dr. George Danford Thomas, Coroner for the Central Division of the County of London, held an inquest at Paddington relative to the death of Alfred Rose, aged 49 years, lately residing at 441 Edgware Road. The evidence showed that the deceased, a chemist and druggist, for many years enjoyed very good health. On Sunday afternoon, in company with his son Horace, he went to Hampstead Heath for a walk, and from there went to the Finchley Road Railway Station for the purpose of proceeding to St. John's Wood Road by train, and deceased hurried down the stairs so as to catch the train. On getting out at St. John's Wood he told his son that he ought not to have hurried along. He felt likely to faint, and if he should do so he was to be placed in a cab and taken home. Deceased had not walked many yards when he sank down in a fainting state and, a cab having been procured, he was removed home, where, on being examined by Dr. George Bird, of 251 Edgware Road, life was found to be quite extinct. Dr. Bird now deposed that the death of the deceased was due to syncope from heart-disease. The Coroner said he had known the deceased for some twenty years, and, like his relatives, had no knowledge that he suffered from heart-affection. The jury returned a verdict in accordance with the medical evidence.

CHEMISTRY AND THE CITY GUILDS.—The annual distribution of prizes took place in connection with the City and Guilds of London Institute for the advancement of technical education, on Monday, at Salters' Hall, St. Swithin's Lane, the Lord Mayor presiding. The report spoke of the progress which had been made during the past year, and it stated that the current session promised to be still more successful. A course of instruction in chemistry for elementary-school teachers was given during the year. Certificates were awarded for chemistry to the following students at the Technical College, Finsbury:—J. L. Baker, H. J. Bult, W. O. Kibble, M. Priest, R. Q. Amer, C. H. Desch (who

also received the 2nd prize for highest aggregate of marks and notes in organic and technological chemistry), R. C. T. Evans (as well as the 3rd prize for organic and technological chemistry), E. M. Hawkins (and 1st prize for highest aggregate of marks in organic and technological chemistry during the session). Prizes were also awarded to evening-class students for general and inorganic chemistry: H. J. B. Rawlins, 1st prize (highest aggregate marks for the session); H. F. Hills, 2nd prize; H. Lansdell, special prize (best kept set of note-books). For organic chemistry, a 1st prize was awarded to A. H. McConnell (highest aggregate marks for the session, qualified for 2nd prize in practical physics); while A. Nixon received the 2nd prize. These were distributed by Sir George Bruce.

MIDLAND COUNTIES CHEMISTS' ASSOCIATION.—A meeting of the Council of the Midland Counties Chemists' Association was held on Wednesday, December 9, at the Mason College, Birmingham. Mr. A. Southall (President) occupied the chair, and there was a good attendance of members. Mr. R. D. Gibbs moved—

- (1) That every chemist on the register of the Pharmaceutical Society living within a radius of fifty miles of Birmingham be a member of this association in virtue of his qualification without reference to any fee or subscription.
- (2) That a tablet be prepared for presentation to each member notifying his membership.
- (3) That this Council shall be elected from that entire body, and that the election shall be of such a character as shall bring each member a distinct representative on this Council by dividing the members into equal groups and appointing a representative for each group.
- (4) That all the meetings of the Council be reported and published to each member.

Mr. Thonger seconded the resolution, and said he could see in the proposal the groundwork of a successful future. Mr. Perry suggested that an inquiry should be made into the whole matter by a sub-committee. The Chairman said that many attempts of a similar kind had been made, but none of them had proved successful. Mr. Taylor thought to decide quickly on a matter of such importance would be far from wise. Mr. Alcock (Secretary) moved, as an amendment, that the whole subject be referred to a committee. Mr. Prosser seconded this. Eventually it was resolved that the question be referred to a committee consisting of the following gentlemen:—The President, Secretary, and Messrs. Gibbs, Prosser, Perry, Taylor, Thompson, Barclay, Poole, W. Jones, Morris (Walsall), and Gibson (Wolverhampton). Mr. Thompson presented the cricket report, which showed a slight balance in hand. It was resolved that no complimentary tickets should be officially issued for the annual ball in January.

PROFESSOR ARMSTRONG ON FERMENTATION.—The first of the four lectures which Professor H. E. Armstrong, F.R.S., of the Central Institution, has arranged to give the Pharmaceutical Society, was delivered on Wednesday evening to a fairly representative audience. The lecture was unexciting and unrelieved by experiment. Apart from fermentation, the lecturer commented upon the extensive field of research there is in the study of micro-organisms, stating in regard to their property of reconstructing nitrogenous bodies (thus producing alkaloidal substances which can be, to a greater or less extent, employed as protectors or remedies for the diseases which the bacteria produce) that we cannot yet tell the nature of the poison peculiar to each organism. Professor Armstrong then proceeded to indicate that there are many decompositions or organic changes hitherto supposed to be due to catalytic action, which are probably the result of bacteria influence; and in this connection he spoke of nitrification and several aspects of plant-nutrition. The most interesting part of this was that in which he showed the property which certain plants have of assimilating free nitrogen. This is especially the case with leguminous plants, and it has been found that it is due to the presence in the soil of certain organisms which produce a nodular condition of the roots. If the knowledge gained in this matter is properly worked out, it may be possible to so rotate crops as to dispense with the use of nitrates, ammonia, and other artificial manures. He then proceeded to speak of organised and unorganised ferments, and their actions in a general way, giving various examples of fermentation, and speaking particularly of the splitting up of cane sugar. In this part he used different coloured balls to represent the

atoms, showing that the carbon atoms of glucose are bound together in the molecule. The nomenclature of fermentation was also dealt with, and a published note of the author's on hydrolysis was read. It will be gathered from this brief report that the lecture was preliminary in character, and was largely taken up with definitions. It was delivered in a somewhat low tone of voice, and lasted for an hour and a half. It was followed in depressing silence.

LIVERPOOL CHEMISTS' ASSOCIATION.—At the usual fortnightly meeting on December 10—Dr. Symes in the chair—Mr. E. Davies, F.C.S., delivered a lecture on the preparation of a new compound of nickel and carbon monoxide discovered by Drs. Mond, Langer, and Quincke. The compound is produced by reducing nickel oxide by hydrogen at a low temperature, and then passing CO over the metal at ordinary temperature. It is a very volatile liquid, gaseous at 43° C., and is decomposed by heat into Ni and CO. Its vapour gives great brilliance to the flame of the CO. The liquid, on being dissolved in petroleum, slowly precipitates the nickel in the form of a hydrated oxide. Small articles placed in the solution before precipitation takes place become coated with a strongly adherent covering of nickel. The gas was made and burned, and a glass tube was lined with a mirror-like deposit of nickel by heating it whilst the gas was passing through. The discovery of this process has led to considerable improvements in the manufacture of nickel and cobalt, while several questions regarding the action of gases under pressure have been satisfactorily solved. An interesting discussion followed the lecture, in which the Chairman, Messrs. Ward, T. F. Abraham, A. C. Abraham, and others took part.

Dr. Symes then delivered his valedictory address as retiring president. He said that evening concluded the forty-second session, and in looking round at the work of the various associations in this country, he felt satisfied that the Liverpool Chemists' Association showed a record of continuous usefulness comparable with any. He would leave the annual report to deal with the work of the session, but might mention the papers recently read by Mr. Wyatt on "Pill-coating," by Mr. Conroy on "Liquid Belladonna Plaster," and by Mr. Wardleworth on "Spurious Drugs," as of practical value to all pharmacists. Originally this association was the only one in Liverpool before which purely chemical as well as pharmaceutical papers could be read, but since the establishment of a branch of the Society of Chemical Industry no doubt many papers of the former character had gone there. But a lot of useful and interesting work remained to be done, and more workers were needed. One of the important questions waiting solution was, How best to work provincial associations? He had once, as a member of the Pharmaceutical Council, moved that provincial associations should receive annual grants to assist in their work, and should in return report progress from time to time to the Pharmaceutical Society. He urged that though an association might have within itself sufficient vital energy to exist, that existence would be soon waning unless it received some stimulus from without. His proposal was negatived, but he did manage to carry a resolution "that local secretaries be asked to report as to the condition of pharmacy in their respective localities from time to time"; but he was not aware that it was ever acted on. Mr. Ward had put before them on a previous occasion some excellent ideas for the consolidation of the Pharmaceutical Society, and he (Dr. Symes) had given them his ideas on the consolidation of the whole trade. Perhaps things were not yet ripe for so radical a change as he had proposed, but he felt assured that sooner or later it must come to pass if pharmacy were to be established on a solid basis in this country, and, further, such change would react beneficially on provincial associations. What could a Pharmaceutical Society numbering 4,000 do whilst there was a body of 10,000 outside either indifferent or in opposition? In his opinion every person who passed the qualifying examination should be a member of the Society without an annual subscription, and this could easily be done if the Journal were only supplied to those who would subscribe for it. That night he would relinquish the presidency, but hoped to continue his interest in the association, which he trusted would prosper under the guidance of Mr. Ward during the ensuing year. A hearty vote of thanks to Dr. Symes for his services brought the meeting to a close.

THEFT OF DRUGS AT SMETHWICK.—On Wednesday of last week, at the Smethwick Police-court, William Moberley Smith, chemist's assistant, residing at Bolham Road, Smethwick, was charged with stealing a quantity of drugs and medicines, the property of his late employer, Mr. Edward Presley, chemist and druggist, of Bristol. The prosecutor stated that the prisoner had been in his employ at Bristol as his assistant. He suspected him and went, in company with Inspector Bakewell, to the defendant's house in Bolham Road, and there found a large quantity of drugs, most of which he identified as his property. The articles stolen included 6 lbs. of opium, 56 sponges, 30 bottles of perfume, 2 oz. nitrate of silver, 68 brushes, 10 dozen medicine stamps, 1 gallon of spirits of wine, 40 dozen various bottles, and a large quantity of drugs, chemicals, toilet requisites, patent medicines, and thermometers. The value of the drugs was about 27*l*. The prisoner had been in the employ about twelve months, and had sole control of his shop in his absence. Smith pleaded guilty. The bench said they were sorry to see the prisoner in such a position, and in sentencing him to three months' hard labour, they hoped it would be a warning to him in the future.

IRISH NEWS.

A NEW MINERAL-WATER FACTORY is being established in Dublin, at Dycer's Repository, Stephen's Green, by Messrs. Orr & Hovenden, who have been many years with Messrs. Thwaites & Co. (Limited), Sackville Street.

REGISTERED DRUGGISTS.—At an examination for the licence as a registered druggist, held at the Queen's College, Belfast, on December 9, the following passed:—Messrs. B. W. Agnew, Belfast; J. Baxter, Armagh; J. C. Browne, J. D. Carse, J. and W. Clarke, Belfast; A. Hanna, Newtownards; J. Hinds, R. A. Jameson, and T. A. Kirkwood, Belfast; G. W. Lawson, Dungannon; J. Montgomery, Belfast; G. Morton, Bellaghy; J. Richardson, W. H. Ringland, and E. Roberts, Belfast; J. Rooke, Ballyjamesduff; F. J. Shields and R. G. Stevenson, Belfast. At a druggists' examination held on December 16, the following passed:—T. Earl, Ballycarew; Mary Fallon, Athlone; W. F. Kent, Borrisokane; D. Lynch, Portumna; J. McCrea, Newry; C. P. Winton, Dublin.

SCOTCH NEWS.

DEATH OF A GLASGOW DOCTOR.—Dr. Roderick McDonald, Govan, was on Tuesday last found dead in bed in the room behind his drug shop at 987 Govan Road. The doctor was 45 years of age.

ASSISTANT MEDICAL OFFICER FOR GLASGOW.—The Glasgow Health Committee have unanimously decided to recommend the Town Council to appoint Dr. Chalmers, Mossend, to the newly created post of assistant medical officer for the city.

A PHARMACEUTICAL LECTURER.—Under the auspices of the Scottish Society of Literature and Art, W. Lamond Howie, Esq., F.C.S., delivered his illustrated lecture, with five light views, entitled "To Ober-Ammergau and Back, 1890, including the Passion Play," in the Christian Institute, Glasgow, on Friday, December 11. There was a large audience.

NORTH BRITISH BRANCH.—An evening meeting will be held at 36 York Place on Wednesday, December 23, at 8.30. The following papers will be read:—1. "Report on Commercial Gaseous Powders," by W. Duncan and T. S. Tweedie. 2. "Solubility of Iodine in Chloroform," by W. Duncan. 3. "Notes on Some Additions to the Museum," by J. Rutherford Hill. 4. "Notes on Indian Drugs," by T. Stephenson.

SUDDEN DEATH OF A DOCTOR.—Dr. W. Bruce Gowans, Perth, died last Friday afternoon, in his father's house there, after an illness of about an hour. Dr. Gowans had a cold and was attending to his practice when he took worse, and went to his father's house, where he expired. The deceased was a promising young practitioner of 31. He graduated as M.A. at the Aberdeen University, and afterwards proceeded to Edinburgh, where he took his M.D. degree. Dr. Gowans

was a son of Mr. James Gowans, who for many years was in business as a chemist at 21 High Street, Perth.

A PAUPER'S MEDICINE.—At a meeting of the Peterhead (Aberdeen) parochial board a discussion arose on the reading of a minute of the Finance Committee regarding medicine supplied to one of their paupers while in Fraserburgh. It appeared that during the eight weeks the pauper had been residing there she had been supplied by a local chemist with twenty-eight bottles of cough-mixture, for which a charge of 1*s*. 4*d*. a bottle was being made. The committee were surprised, and looked upon this as unreasonable, and instructed the inspector to procure a copy of the doctor's prescription meanwhile deferring payment.

A DRUGGIST DIVORCED.—On Friday, December 11, Lord Wellwood, sitting in the Outer House of the Court of Session, granted a divorce in favour of Anne Jane Gibson or Campbell, Clarkfield, Helensburgh. Her husband, Lorne John Malcolm Campbell, a chemist and druggist, at one time carried on business in Helensburgh. He married Miss Gibson in April, 1871—Clarkfield House and some other property in Helensburgh belonging to her. In 1883, Campbell got into difficulties and went to Liverpool to a situation. He returned to Helensburgh in June, 1885, and lived with his wife for a fortnight, when he sailed for New York. He corresponded with her down to April, 1886, when the correspondence ceased. She got a friend in Chicago to make inquiries, which resulted in the discovery that he was living at 127 Thirty-Fifth Street, Chicago, U.S.A., with a woman who had borne two children to him.

EDINBURGH CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.—The annual *conversazione* of this association was held in the Literary Institute on Friday evening, December 11. The attendance was smaller than usual. Amongst those present were Mr. J. L. Ewing, chairman of the Executive of the North British Branch, and Mrs. Ewing; Mr. J. B. Stephenson, chairman of the Board of Examiners for Scotland, and Miss Stephenson; Mr. William Aitken, C. F. Henry, Mr. R. McAlley, Mr. R. I. McDougall, C. A. Macpherson, T. Thompson, J. Thompson, J. R. Young, junr., &c. Mr. John Lothian presided, and in a few opening remarks said that the association was in the midst of a very successful session. Thereafter a lengthened programme of vocal and instrumental music was gone through in a manner which called forth the frequent plaudits of the audience. Dancing followed. The dance was under the management of Messrs. A. G. Hendry and A. Robertson. A supply of aerated waters was sent by Messrs. Baildon & Son, Duncan, Flockhart & Co., J. Mackay & Co., J. F. Macfarlan & Co., J. Robertson & Co., and T. and H. Smith & Co. Bovril (Limited) also sent a supply of their popular manufac ure. The hall was beautifully decorated with plants lent by Mr. James Buchanan.

THE PARAFFIN NUISANCE.—At the Justiciary Appeal Court, Edinburgh, on Monday, William Walker, partner of the firm of Hunter & Walker, Gallowgate, Aberdeen, appealed against a conviction for keeping paraffin in such a way as to be a nuisance to his neighbours. The facts of the case were reported in THE CHEMIST AND DRUGGIST, October 17. The firm kept from 900 to 1,200 40 gallon barrels of paraffin in a garden, and it was proved by a number of the occupiers of adjoining properties that the smell of the paraffin was very offensive to them; that some of them who were in perfect health before the paraffin had been stored there had since suffered from headaches, sickness, and want of appetite. It was established by medical evidence that these symptoms were caused by the offensive odour of the paraffin, and that the continued inhalation of air so impregnated with paraffin was undoubtedly injurious to health. For the defence, Dr. Young, the paraffin authority, three doctors, and other witnesses testified to the harmlessness of the paraffin vapour, but the sheriff imposed a fine of 20*s*. and 37*s*. 6*d*. cos*s*. The principal question argued on Monday for the appellant was whether the complaint was relevant under the Police Act of 1862. Judgment was reserved.

DISTILLATION OF MINERAL OILS.—At the meeting of Royal Scottish Society of Arts in Edinburgh on Monday night, Mr. John Laing, F.I.C., read a paper on "Destructive and Conservative Distillations of Mineral Oils, and their Molecular Condition." Mr. Laing described three methods by which mineral oils could be cracked up into lighter products. The

first of these was effected by a still so arranged that the oil was continuously being distilled into itself until the required density was obtained. He detailed his method for distilling under pressure, by means of which a hold is kept of all the condensable gases until liquefied. In this arrangement a relief-tank is interposed between the pressure-valve and the condenser, into which the gases escape as they come from the still, and here the pressure is distributed over such a large area that it is practically reduced to *nil*, the oil running to the receiver at ordinary atmospheric pressure. Mr. Laing also described a new form of still for the purpose of preventing oils from being broken down, as in distilling for lubricating-oils and paraffin wax. This is so constructed that the heavy residues which are continually formed under distillation are removed from the source of heat as soon as formed. One great effect of this still is that, in addition to being economical in working, it produces oils of higher density and greater viscosity than are otherwise obtainable.

"HEAT—SENSIBLE, LATENT, &C."—At the fortnightly meeting of the Glasgow Assistant Chemists' Association, held on December 9, a paper on "Heat—Sensible, Latent, &c.," was read by Mr. George Robertson, the secretary of the society. The lecturer dealt with the theories and phenomena of heat in a skilful manner, and drew especial attention to the more unusual results of observations. For instance, he pointed out that while most bodies expand on the application of heat, bismuth is an exception, for it expands on cooling and solidifying. Indiarubber, too, contracts with heat and expands with cold. Amongst the common metals zinc expands most (0.003011), and platinum least (0.000884), in rising from a temperature of 32° F. to 212° F. The conduction of heat was explained. In this connection Mr. Robertson referred to M. Bontigny's experiment of freezing water in a red-hot platinum crucible by forming between the metal and the liquid a stratum of vaporous sulphuric acid. On the same principle a person can handle red-hot lead without injury. The hand, however, must be perfectly clean and coated with a "skin" of steam. In order to carry out this singular experiment with perfect safety the hand should be washed very carefully in some liq. ammon. fort., and then dipped in the red-hot metal. Any danger to be feared from this experiment could only arise in the event of the lead not being hot enough, as, if that were the case, the metal would solidify round the fingers. An experiment of a similar kind is frequently resorted to on the occasion of a foundry being visited by distinguished personages, some of the workmen walking with their naked feet on red-hot iron, their feet being first prepared in the manner alluded to above, or coated with a skin of glue or sand, both non-heat-conducting substances. In dealing with latent heat the lecturer described an interesting experiment. If a mixture of equal weights of sal ammoniac and nitre in powder be taken with cold water added, and this stirred with a thin test-tube containing cold water, the liquid in the test-tube will soon freeze owing to the abstraction of its latent heat during the solution of the salts. Mr. Robertson was awarded a vote of thanks.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

UNPUBLISHED WORKS OF SCHEELE.—At the last meeting of the Academy of Sciences the secretary read a letter from the explorer Nordenskjöld, stating that he has recently discovered a variety of manuscript and unpublished works of Scheele, the Swedish chemist. He proposes to publish these documents. Judging from M. de Nordenskjöld's explanations, his work is likely to prove of considerable interest, and will constitute an important addition to the history of chemistry.

A GROCER CONVICTED FOR PRACTISING PHARMACY ILLEGALLY.—Mme. Maillard-Sérot, grocer at Nantes, was convicted last May by the magistrates of that town of illegal practice of medicine and pharmacy, and fined 20*l*. Dr. Lescure, who signed her prospectus, &c., and who prescribed drugs prepared by her, was sentenced to 24*l*. fine. The two prisoners were likewise ordered to pay 25*l*. damages to the syndicate of pharmacists of the department. They

recently appealed to a higher court, however, and the fines were reduced to 8*l*. and 12*l*. respectively, and the damages to 2*l*.

CHARGED WITH ASSASSINATION.—A young man named Octave Midy, who stated that his last employment was that of assistant in a pharmacy in the 13th Arrondissement, was arrested last week on a charge of murder. The inhabitants of the neighbourhood of the Boulevard du Temple are much excited by the recent assassination of a lady in broad daylight in her own apartments, and this young man is only one of numerous individuals denounced to the police. Luckily, a servant, who was wounded by the assassin, declared that Midy was not her aggressor, though the police had carefully provided him with a silk hat and portfolio similar to those used by the actual murderer.

PHARMACISTS AND STREET ACCIDENTS.—A Mme. Peyrard was knocked down one evening last week by a vehicle while crossing the Faubourg St. Denis, and complained of pains in the lower limbs. Sympathising onlookers conducted the injured lady to a neighbouring pharmacy, belonging to Mr. Lacroix, 76 Rue du Château d'Eau. This gentleman, however, apparently did not consider Mme. Peyrard had received any injury, and declined to show her attention. A crowd had meanwhile formed outside the pharmacy, and the people sided with the victim of the accident. A quarrel ensued, the result being that Mr. Lacroix had several persons arrested, but they were immediately released at the police-station. This is said to be the first instance here in which a pharmacist has not cheerfully acted as the good Samaritan in a case of accident in the street.

THE SUPPLY OF MEDICAMENTS TO HOSPITALS.—The Department of Public Assistance, the Parisian equivalent to the English Poor Law Administration, has been accused of numerous extravagances and waste of public funds. It is stated that, though its central pharmacy is directed by a gentleman of high scientific attainments, who is fully capable of obtaining all articles at a very economic rate, certain doctors give their orders to outside and more expensive establishments. One medical man insists on using, say the accusers, Scotch chloroform; another buys annually about 200*l*. worth of sponges, instead of obtaining them from the pharmacy. A third objects to its iodoform gauze, and supplies himself elsewhere. With regard to this last item, as the gauze can only be unrolled at the moment the surgical operation takes place, short measure, it is remarked, cannot well be checked, and this opens the door to suspicious accusations of "jobbing" and malversation. It is suggested that the authorities should take firm action, and insist that all medicaments should be obtained exclusively from the official central pharmacy.

PHARMACISTS AND HERBALISTS.—The herbalists—a numerous class in Paris and the provinces—complain of efforts on the part of pharmacists to suppress, by means of legal processes, their calling. The pharmacists' case is that these tradesmen are allowed, without passing the ordeal of a pharmaceutical examination, to sell poisonous substances. It is likewise alleged that herbalists frequently lend themselves to illegal practices in cases of abortion. The pharmacists have no objection to the free sale of innocuous herbs, either by herbalists or otherwise. The herbalists retort that, as to illegal practices, even the backbone imported by a stiff examination sometimes fails to prevent a qualified pharmacist falling a victim to temptation. They point out, also, that if innocuous "simples" are allowed to be sold by grocers, the resemblance between certain articles may lead to fatal mistakes. For instance, to sell aconite for mugwort, belladonna for chicory, hemlock for parsley, &c., are errors which might happen to an inexperienced vendor. The herbalist is, say they, "the poor man's pharmacist," selling for a penny an article for which the qualified druggist would ask a shilling. It is hardly probable that a law will be passed which would deprive some thousands of persons of their livelihood; perhaps, however, a stricter supervision of herbalists' businesses would meet the case and protect the public.

THE GENERAL ASSOCIATION OF FRENCH PHARMACISTS.—At the last meeting of this society a number of interesting subjects were discussed, among which may be mentioned the following:—The first decayed pharmacist to whom the asso-

ciation had awarded a pension of 25% having recently died, it was decided by the members that the pension should be continued to his widow. A similar pension was awarded to an aged and blind pharmacist, who was presented by a sister society, and whose case fulfilled the conditions laid down by the statutes. Certain smaller sums were also voted. An interesting discussion also took place relative to the best method of combating the suicidal policy adopted by certain pharmacists of selling specialities at extremely reduced prices. Two propositions were made—(1) that the association should come to an understanding with the specialists that these latter should not supply pharmacists who gave exaggerated reductions; (2) that the members of pharmaceutical societies should only order specialities from such druggists and commission agents as undertook not to supply the "cutting" pharmacists in question. But both these proposals were rejected, as laying the individuals who took such steps open to the action of the French law, which most jealously guards the entire liberty of internal commerce, suppressing all monopolies or exclusive dealing unless under a Government patent. The only remaining remedy seems to be to reduce to 10 per cent. the discount given by specialists to pharmacists. But this would be a severe blow to pharmacists in small country towns, who compensate for a limited trade by fair profits, and who could not make a living were the specialities reduced. The question of drugs for the French army—already referred to in this column on November 21 last—was discussed. Mr. Leprince pointed out that in certain towns—such as Bourges—the pharmacists would suffer severely, as, under the proposed new regulations, every workman employed in the Government arsenals and foundry would obtain drugs for himself and family at cost price from the military hospital. But M. Crinon pertinently replied that the legality of the action of the Minister of War was indisputable, for the Court of Appeal has just again decided that hospitals have the right to sell drugs to the public, and military hospitals could not expect to be on a less favourable footing than civil establishments. It was, however, decided that further pressure should be brought to bear on the Minister of War. A proposition was brought forward that the retired members of the profession willing to act as *locum tenens* for their younger confrères who may be called to active service in time of war should give in their names. The various pharmaceutical societies whose opinion was asked by circular on this matter appeared to be unable, or unwilling, to take the necessary active steps to bring about a conclusion, and the idea has consequently been temporarily abandoned.

Foreign and Colonial News.

KOCH'S CURE—The authorities of the civil hospitals of St. Petersburg, following the example set in the military hospitals, have definitely decided to abandon Koch's tuberculin in the treatment of tuberculosis.

GERMAN SOAP-MAKERS UNITE.—On December 6 a central association of German soap manufacturers was founded in Liepzig. The office of the union is in Dresden, and its main objects are the promotion of the interests of the German soap-making industry, and the advancement of the technical education of those engaged in the business.

VANILLA IN QUEENSLAND AND FIJI.—Efforts are now being made in some parts of North Queensland to grow vanilla from plants supplied by the Acclimatisation Society. In Fiji, also, vanilla-growing is progressing. A planter who had grown and cured a quantity of vanilla, some time back forwarded three samples to a wholesale druggist in Melbourne, whose report is so favourable that it is intended to extend the cultivation very materially.

AMERICAN DUTIES ON PERFUMED WATERS.—Messrs. Dodge and Olcott, and other New York drug merchants, have entered protest against the excessive duty on rose-water and orange-flower water imported by them at various times. The protest covered cherry-laurel, rose, and orange-flower waters, which were assessed for duty at 25 per cent. *ad valorem*, and were claimed by the appellants to be dutiable at 20 per cent. only. The collector's action, however, has been confirmed by the authorities.

RUSSIAN CHEMICAL INDUSTRY.—No industry has grown in larger proportion in Russia, under the protective system of the last decade, than that of chemicals and dye-stuffs. A comparative table of the value of the produce of Russian industries, recently compiled, shows that while the total output of manufactures in the principal industries of the empire has risen from 317 to 562 millions of roubles, or 77.4 per cent., between 1876 and 1888, that of chemicals and dye-stuffs has advanced from 5.5 to 15.6 millions of roubles, or by 183.6 per cent.

COCA IN MADRAS.—The coca-plant has been cultivated for many years in several parts of the Madras Presidency. It grows like a weed, and the yield of cocaine from the leaves is said to be fully equal to that obtained from the American shrub. Should there be, therefore, at any time a larger demand for this alkaloid, it is said that in Southern India there would be no difficulty in obtaining a very large amount of the leaves. The Government botanist, who reports on the matter, is, however, doubtful whether it would pay planters to cultivate the plant in any large quantities at present.

MESSRS. OTTO MEISSNER & Co., essential-oil merchants and wholesale druggists, of Leipzig, celebrated the twenty-fifth anniversary of their establishment last Wednesday. The present proprietors of the firm are Apotheker Hermann Blüthner and Druggist Fritz Meyer. The originator of the firm, Mr. Otto Meissner, severed his connection with it a few years ago in order to devote himself to the presidency of the German Druggists' Union, and the editorship of the *Droguisten Zeitung*. In our contemporary this week he gives an interesting illustrated sketch of the establishment and progress of his late firm.

THE "FARMACIA VATICANA."—"There is," says the *Lancet*, "so much of mediæval superstition inherent in this venerable institution that rational medicine will suffer no loss by its collapse, which, it is announced from Rome, is imminent. It used to have a large and lucrative *clientèle* among the votaries of the Roman Catholic Church, and the Administrators of the Sacred Palaces looked to it for no small share of their revenues. But little by little its custom has declined, and of all the 'infallible' medicines it prepares and dispenses that which alone retains its popularity, and is still in demand, is the pill of the 'Maddona del Buon Consiglio.' Perhaps the explanation of this secret remedy's still holding the field may be found in the fact that it is distributed gratuitously."

LIQUORICE MANUFACTURE IN FRANCE.—The *Droguiste* describes a liquorice manufactory in the town of Uzès, Department of the Gard, where the sticks, which are known in France by the fancy word "Zan" (derived, it is said, from the colloquial slang expression "donnez-moi-z'en," supposed to be used by children eagerly asking for the sweetmeat), are manufactured. The liquorice-root from which the French preparations are manufactured is grown on the River Ebro, in Spain, and there the house in question (which, we suppose, is typical of others in the same trade) has a branch establishment, employing about 350 hands, who sort, decorate, and bundle the best pieces of the root for export to France, and boil the remainder into paste. From Mequinez, where the factory is situated, the liquorice wood and juice are sent to Tarragona and thence to Uzès. The Uzès factory employs about 250 hands, and is lighted throughout by electricity.

THE COLOMBO APOTHECARIES' COMPANY (LIMITED).—This undertaking has been reconstituted, and a new company will take over the business on January 1 next. The capital of the new company is Rs. 300,000, in 3,000 100-rupee shares. Six residents in Ceylon have been appointed directors, and Mr. W. M. Smith will act as managing director. Of the nominal capital, 2,750 shares, representing a capital of Rs. 275,000, will be issued at once in Ceylon. Of this Rs. 235,000 is to be applied to the purchase of the lease of the premises (where the business is now carried on), the stock-in-trade, plant, furniture, fittings, book-debts, and goodwill. The vendors, who stipulate to retain a third of the share capital, will not for five years after the incorporation of the company participate in any dividend on 500 of their shares until a minimum dividend of 10 per cent. shall

have been paid on all other shares. Messrs. W. M. Smith & Co. agree to act as agents and secretaries for five years.

GERMAN COLONIAL PHARMACIES.—In the *Pharmaceutische Zeitung* an evidently well-informed writer throws cold water upon the German scheme for floating a limited company for the establishment of colonial pharmacies on a grand scale in the German possessions. The writer in question expresses his opinion that in none of the German colonies could such a scheme pay for very many years to come. In none of the four German African possessions are there sufficient whites to keep a pharmacy going, and the black population would never dream of using a European establishment—at least, if one may judge from the example of such a comparatively cultured place as Zanzibar, where there are several pharmacies, not one of which is ever resorted to by a non-European. In the German Togo territory (West Coast of Africa) there are only thirty whites. The sickness percentage among these was 86.7 in 1889, and there is a Government physician in the colony. There are rather more Europeans in the Cameroon colony, but these are spread over a very large territory, and live partly in isolated trading-stations, each of which has its own private medicine-store, which is supplied from Hamburg. Merchants who know the circumstances of the colony strongly advise against the establishment of an independent pharmacy. In German South-West Africa the prospects are equally poor. In the largest German colony, that of East Africa, the number of white inhabitants (exclusive of missionaries) is only about 200, and the recent decision of a German firm in Zanzibar to establish a branch pharmacy there is considered a somewhat venturesome step by those who know the circumstances. Then there is German New Guinea, where the conditions are still more unfavorable. In Zanzibar and German East Africa there are already seven mineral-water factories, and a promising accessory field of business to a pharmacist is, therefore, already occupied to overcrowding.

MANCHESTER PHARMACEUTICAL ASSOCIATION.

THE second meeting of the session of this association was held on Wednesday night, December 9. For the customary meeting-place the Memorial Hall was substituted, in the hope that, all the registered chemists and druggists of the district having been invited, the attendance might prove larger than usual. This hope was abundantly realised, the gathering numbering something like seventy or eighty. At eight o'clock the President, Mr. George S. Woolley, took the chair, and lights were promptly lowered in preparation for the attraction of the evening, the lantern-lecture by Mr. Wm. Kirkby, F.R.M.S., lecturer in pharmacognosy at the Owens College, on

THE MICROSCOPICAL CHARACTERS OF THE MORE IMPORTANT OFFICIAL DRUGS.

The characteristics of each of the drugs shown on the screen were carefully pointed out, with the view of enabling those present to recognise microscopically the true drugs, and to detect adulteration. Mr. Kirkby said he wished to arouse amongst the younger members an interest in the study and work connected with the microscopic analysis of the drugs they were in the habit of handling. There was real need of the microscope in such work, for drugs were frequently gathered by inexperienced collectors and manipulated in drug warehouses before reaching the pharmacist. The constituents of plants varied very much with regard to their active principles, and a microscopical examination frequently revealed to the careful observer much that he would not otherwise be able to see. Again, the employment of the microscope was exceedingly useful in the examination of small quantities of powders, especially where only a limited quantity of the substance was obtainable. In a slide showing a section of conium-seed the difference between that and aniseed was emphasised, for the reason, Mr. Kirkby said, that owing to the similarity in their external appearance errors had arisen, and these two drugs had been found mixed, no doubt through ignorance. Particular attention was directed to the triid stigma of *Crocus sativus*. The section shown on the screen

exhibited a cleft down the side of one portion of the stigma, and this, it was pointed out, was characteristic of the true saffron. Another capital slide was that showing the nox vomica seed, with the hairs covering the seed very well defined.

The Chairman, in proposing a vote of thanks, spoke in praise of the paper and its reader. A paper of such high order, so beautifully illustrated, ought to serve as an encouragement to students to go more thoroughly into the microscopical study of drugs, so that they might get to know something of the drugs they were handling daily. He looked upon the paper as the inauguration of a new era in the history of the association, as he believed it would help to make the young members rally round and bring back to the association something of its old life.

Professor Leech (not the Mayor of Manchester, as the *Lancet* recently described him, but a brother of the Mayor) was invited to second the resolution. In doing so he urged the great importance of the microscopical examination of drugs, and suggested that the ability to make such examination might be very useful in the detection of adulteration. In his opinion pharmaceutical chemists ought to be able to trace adulteration. If the public only saw or knew the way in which drugs were sent over to London they would rub their eyes. At one time he used to go down to that enormous emporium of drugs in Fenchurch Street, and the amount of stuff of all sorts of extraordinary kinds that came in was wonderful. The curator, who had to do the sampling, found that the various parcels varied enormously in composition. He got occasionally drugs for the college, including, for instance, ipecacuanha, which they would hardly recognise as such. He wondered where all those things went. They were bought by brokers, he supposed, and ultimately made into medicine! Druggists when they bought these things too often did not know what they were buying. The study of pharmacognosy was very important, and he was glad to know that the first lectureship on the subject which had been established at any college in England was that connected with the Owens College. When they considered how the knowledge of this subject was to be spread among pharmacists to a greater extent than at present, they got to the educational side of the question. As he was connected with the Medical Council of England—(applause)—that question had of necessity received a good deal of attention from him within the last two or three months. It seemed to him that one of the necessities of pharmaceutical education in the future would be a Preliminary examination in general and microscopic botany. In the interests of the public, of the medical profession, and of pharmacists, it was of the utmost importance that this should be done. It was his duty as lecturer in materia medica to teach the students not how to recognise these plants, but to show them the changes that took place in them, as it was important to know whether a drug was in proper condition, and that you could only tell by an examination of it. With the people who bought and sold these things the transaction was purely a commercial one—they did not care what they put in so long as they sold it. The quality and composition of the drugs was specially important to druggists and to medical men, for it was a curious and important fact that where one dose produced one effect a double dose might produce a diametrically opposite effect, and if they used a drug that had altered in condition they might produce an absolutely opposite effect from what was intended. He was glad, therefore, to see that the process of standardising drugs was being attended to. He concluded by expressing a hope that the Manchester Pharmaceutical Association might continue to flourish.

Mr. H. Wilson having made a few remarks, the vote of thanks was passed.

In reply to a question by Mr. Mercer as to what were suitable books for those who desired to study the subject he had treated of, Mr. Kirkby recommended Fückiger's "Elements of Pharmacognosy," and also Gerrard's Treatise (in French). The literature on this subject and suitable to chemists was very limited.

JALAP.

The Chairman referred to the difficulty of obtaining jalap-root that would give the percentage of resin mentioned in the Pharmacopœia. He said he did not know whether it

The Chemist and Druggist

SUPPLEMENT

Businesses Wanted.
Businesses for Disposal.
Premises to Let.
Auction Sales.

SATURDAY, DEC. 19, 1891.

Partnerships.
Situations Vacant.
Situations Wanted.
Miscellaneous.

A Copy of this Supplement is inserted in every number issued of "The Chemist & Druggist."

CHRISTMAS HOLIDAYS.

Advertisements for the Issue of December 26 must be received at the Office, 42 Cannon Street, not later than 5 p.m. on Wednesday, the 23rd inst.

CHEMISTS' TRANSFERS.

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4.—**LONDON (Death Vacancy).**—Centrally situated; Retail and Dispensing, with family connection; returns about £500 yearly; very profitable; large house attached; well-fitted shop and good stock; about £200 required.

5.—**BUCKS.**—Good locality; Mixed Business; old-established concern; situate in a first-rate position; returns between £1,200 and £1,300 yearly; good house and commodious premises; terms, small premium and valuation.

6.—**HANTS.**—Fashionable town; season just commencing; good-class Dispensing Business; returns £2,000, handsome shop and good house on lease; purchasers prepared with about £2,000 will receive full particulars on receipt of reference.

7.—**NORTH OF ENGLAND.**—Light Retail and Prescribing Business; all cash; returns £1,00 yearly; situate in a prominent position; handsomely fitted shop and good stock, very low rental; terms valuation of stock and fixtures only.

8.—**KENT (Seaside).**—Good-class Dispensing and Retail Business; established many years; returns £700 yearly, with good profits; large well-fitted shop, and good stock; about £575 required.

9.—**HANTS.**—Good business town; Light Retail and Dispensing; returns last year £450; convenient house; good shop, fairly fitted; about £300 required.

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11.—**WARWICKSHIRE.**—Good residential locality; Retail and Dispensing Business of good class, with good family connection; returns last year £1,350, good profits; well-fitted shop, large house and garden; about £1,300 required.

12.—**WEST OF ENGLAND.**—Seaport town; Light Retail, Dispensing, and Prescribing; returns £450 yearly, with good profits; good-size house, rent £35; small garden attached; about £450 required, or offer considered.

13.—**SUSSEX.**—Fashionable town; good-class Retail and Dispensing Business; returns nearly £200 yearly; convenient house; special reasons for sale; offer wanted.

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SPECIAL NOTICE.—TO PRINCIPALS AND ASSISTANTS.

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TENDER.

ST. MARY'S HOSPITAL, LONDON, W.

CONTRACT FOR DRUGS AND CHEMICALS.

THE Board of Management is prepared to receive Tenders for the Supply of Drugs and Chemicals for the three months ending 15th April next.

Forms of Tender can be obtained at the Secretary's Office. Tenders must be delivered in sealed envelope on or before Monday, the 28th instant, at noon, addressed to the undersigned and marked "Tender for Drugs."

The Tenders must be accompanied by samples of certain articles as required. The Board does not bind itself to accept the lowest or any Tender.

By Order,

THOMAS RYAN, Secretary.

14th December, 1891.

FOR SALE.

FOR SALE, by private treaty only, in the Midlands, a genuine old-established country Business doing about £900 yearly; good profits from Dispensing, Prescribing, and General Retail; good opening for a Dentist; good shop, and house, with garden, vinery, conservatory, &c. "Grapes," 42 Cannon Street, London.

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PARTNER wanted, with about £500, to develop a business on Store lines; first-class position; main road, and rapidly increasing neighbourhood; London suburb; principal shopping centre for miles round. Address, with reference, 158/35, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

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STOCKS AND FIXTURES BOUGHT FOR CASH.

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DEVON.—Very profitable unopposed good-class Retail; returns £400; can be much increased; price £330.

NORFOLK.—Dispensing and Light Retail; returns £600; post-office worth £25 per annum; rent more than cleared in season by letting; price £600.

STAFFS.—General Retail in pleasant town; returns £800; price £450.
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3s. 6d. for fifty words; 6d. for every 10 words beyond.

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LONDON Suburb; main thoroughfare of populous locality; small Business, with lock-up shop, for disposal; suit a beginner; established 10 years. Apply by letter to "Aconite," Mr. Lance, 12 Middle Row, Knightsbridge, S.W.

£60.—Chemist's Business to be disposed of at once; situated in one of the best thoroughfares in Nottingham; plate-glass windows; comfortable house, private entrance and yard; low rental. H. E., 52 Derby Road, Nottingham.

FOR the New Year.—A genuine Family and Dispensing Business, in good country town, doing £600 to £700, with good scope for increase; no agents need apply. Letters only to "Associate," c/o Townsend, Westcote Street, Holderness Road, Hull.

A RETAIL Chemist's Business in country town, the centre of a large Agricultural district; good opening for one acquainted with agricultural trade; superior fittings; rent £32; price moderate. Address, I. W. Plummer, Solicitor, Cockermouth.

FOR disposal, the Business of the late G. B. Howorth, Irthlingboro', Northampton; returns between £7 and £8 per week; handsome fittings; well-assorted stock; no other Druggist; rent £16 10s. per annum; price £150. Address, Howorth & Parkin, Doncaster.

LONDON, W.—On account of ill-health; main thoroughfare; returns about £800; increasing business; more than doubled in 4 years; most successful specialties; lease; no agents. B. D., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

YORKS.—Very desirable unopposed Business; population £6,000; returns in drugs, £700; a large proportion Prescribing and own Proprietaries, and £400 in Gilbey's Agency; good shop and house; rent £30; lease 10 years to run; nett profit £350. F. J. Brett, 60 St. Stephen's Road, Leicester.

IN one of the leading towns in the West of England.—A first-class Mixed Light Retail, Prescribing, and Dispensing Business, with Wines and Spirits; returns have averaged £1,900 for last 3 years; handsomely fitted; good stock; large house; about £1,600 required. N. M., 60 Crescent Road, Reading.

IMMEDIATE disposal.—An old-established Chemist and Druggist's Business, in the leading thoroughfare of Liverpool; consulting-room and large house attached; rent £30 per annum; for goodwill, fixtures, &c., a very moderate price for ready cash; satisfactory reasons given for selling. Apply, 222 Breck Road, Liverpool.

EASTERN COUNTY.—Light Retail and Prescribing Business; returns about £700, with full prices, and nothing heavy; low rent, on lease; 10-roomed house, and large walled-in garden; satisfactory reasons for leaving; price £470; full investigation allowed. "Conia," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

CASTLE HEDINGHAM, Essex.—This business is not sold, and may be treated for privately; returns are £450 at full prices; 9-roomed house; large garden; price about £200; business is capable of being doubled, as it is neglected; applicants must have the cash. Full particulars of Messrs. Berdoo & Co., 30 Jewry Street, Aldgate.

THOMAS TOMLINSON & SON, Chemists' Valuors and Transfer Agents, 9 New Cannon Street, Manchester, have Businesses for disposal at St. Helen's, three at Bradford, Liverpool, Nottingham, Wales, Manchester (outside), Burnley, Dewsbury, Dewsbury (suburb), Salford, Rochdale, Preston, Manchester, Longton, Sheffield, Ancoats, Manchester, Mansfield, Ardwick, Docking, Ollham, Hollinwood (suburb), Bolton (outside), Chesterfield (a splendid opportunity), Carlisle, and various others. Parties desiring Businesses should give district and class of trade required. No charges to inquirers or purchasers.

Messrs. CROCKER & CO.

Trade Valuers, Transfer Agents, and Accountants,
15 WALBROOK, E.C.

SOMERSET.—Old-established Retail, Dispensing, and Prescribing trade; returns £800; price £600; handsome pharmacy and good house.

LANCASHIRE.—Good-class Retail and Dispensing; returns £520; price, valuation of stock and fixtures.

LOME COUNTY.—Light Retail and Dispensing; returns £400; low rent; price £320; large and convenient house, with nice garden.

SUSSEX.—Old-established Retail and Dispensing, with good sale of own specialties; returns £600; price £450; good house and garden.

KENT.—Family and Dispensing trade, with Post-Office; returns over £800; price £600; large house and garden.

DEVON.—Old-established Retail and Dispensing, with good sale of own Specialties; returns £600; price £450; good house and garden.

BUCKS.—Light Retail and Dispensing; very low rent; returns £450; price £350, good house and garden; worth attention.

MIDLANDS.—Retail, Dispensing and Prescribing; returns £500; price £200; double-fronted handsome pharmacy.

NO CHARGE TO PURCHASERS.

VALUATIONS A SPECIALITY. TERMS ON APPLICATION.

BUSINESSES FOR DISPOSAL—Continued.

GUERNSEY, Channel Islands.—Old-established Retail, Dispensing, and Prescribing Business, in a thickly-populated neighbourhood; returns £400; convenient house, good store-room; rental £38; price to an immediate purchaser £250; ill-health only cause of disposal; particulars on application. J., 10 Vowler Street, Walworth, London, S.E.

£50 cash will purchase a Genuine Business in a good main thoroughfare S.W. of London; returns £450; handsome double-fronted shop, well fitted and stocked; good house; price £225; £50 cash, balance by easy instalments; must sell through illness. "Bovin," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

£350.—A genuine Dispensing and Prescribing Business, a few miles from City; first-class increasing neighbourhood; handsomely-fitted shop and well stocked; good profits; this business is capable of being doubled in short time by an industrious man; net rent £30. 158/35, Office of THE CHEMIST AND DRUGGIST, 42 Cannon St., E.C.

£200.—Light Retail, Dispensing, and Prescribing Business, situate in busy main road, mahogany fittings and well-stocked; returns £300, and capable of much increase; owner having taken larger concern desires to sell early; full particulars to genuine applicants. Apply "Statim," care of E. Stow Morris, Chemist, 117 Heale Road, Hull.

£150.—A bargain; good Mixed Drug Business in manufacturing district; entirely under manager, and greatly neglected; large shop, good fittings, and well-stocked; worth double; returns £350; has done more than four times the amount, and would do again if properly attended. "Quinine," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

£2,000 to £3,000 returns.—Very desirable old-established Business; no heavy trade; position best in large Lancashire town; ample scope for increase; well adapted to two business men, who could largely develop; goodwill £400 and valuation of stock and fixtures, about £1,600. "Lanc," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SURREY.—Branch Business; exceptional opportunity for a young man; situated in a large and improving neighbourhood within 30 miles of London; returns, under had management, about £250; may be easily doubled; large shop, well-fitted and stocked; 5 rooms, cellar and garden; rent low; good lease; no chemist near. Address, P. G., The Laurels, Park Lane, Weydon.

BIRMINGHAM suburbs; thickly populated middle-class district; Retail and Prescribing; good prices; few patents; excellent house; returns nearly £500, with exceptional profit; Vendor attends medical school, and, absent most part day, cannot give proper attention; would much improve with full supervision; positively no opposition, and great scope. "Medicus," Wyloys (Limited), Birmingham.

FOR sale by private treaty, two old-established prosperous Drug and Drysaltery Businesses, working admirably in conjunction. Lot 1. Total ingoing, about £350; returns 1890, £743, all retail; rent £20. Lot 2. Total ingoing, £550; returns 1890, £1,308, all retail; rent £40. Both are in splendid positions, and would be sold separately; offers considered. Apply, Goodeve & Evans, Cannon Street, Birmingham.

BUSINESSES WANTED.

WANTED, a Prescribing Business in Lancashire, price about £250. Address, "Prescribing," c/o Ayrton & Saunders, 149 Duke Street, Liverpool.

WANTED, early in the new year, a genuine Retail and Dispensing Business within about 100 miles of London; purchase money not to exceed £1,000. Send particulars, in confidence, to W. R. W., c/o Crow, Esq., 436 Hornsey Road, London, N.

WANTED, in England or south of Scotland, a genuine Light Retail Family and Dispensing Business; unopposed; inland preferred; full investigation required; returning from £600 to £1,000; cash ready. Particulars of business, and house, if any, in confidence, to "Delta," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TO LET.

MANUFACTURING Chemists and others.—Premises suitable for the above or any trade. Apply Nihlett, 1 Sannyside Road, Hornsey Rise.

APPRENTICESHIP.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

G. A. THOMPSON, Pharmaceutical Chemist, Tunbridge Wells, has a vacancy for an Apprentice; must have passed Preliminary exam. or its equivalent; premium moderate.

SITUATIONS OPEN.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

JUNIOR required immediately (indoors); abstainer preferred. Sewell, Dispensing Chemist, Bristol Gardens, Maida Hill, W.

WANTED, a Junior or Improver for a light general Retail and Dispensing Business. Reply, in full, T. M. Hales, Warrington.

As early as possible.—Wanted, a good Junior as Improver. Particulars, references, with photo, if convenient, to R. E. How, Chemist, Oxford.

WANTED, an Improver; good opportunity for one wishing to acquire knowledge of Dentistry. R. Bellamy, Dentist and Chemist, Bedale, Yorks.

JUNIOR Assistant, for Light Retail and Dispensing; must be good Counterman and well recommended. Send particulars to Shillecock & Son, Bromley, Kent.

OUTDOORS, for high-class Store trade; First Counterman; tall; gentlemanly appearance and address. Usual particulars and c.d.v. to Wain, Chemist, Leicester.

JUNIOR Assistant wanted; outdoors; must have good references. State full particulars, age, height, and salary required, Markham & Co., Market Place, Darlington.

JANUARY 1.—Junior Assistant; outdoors; first-class Retail and Dispensing. State age, height, salary required, &c., to J. H. Leech, 36 Trinity Street, Cambridge.

PILL-COATERS, thoroughly experienced and reliable; liberal salary. Apply by letter only, "Thruins," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

AT once; a qualified Assistant for a Mixed Country business; outdoors; aged 25 to 30, exceptionally good references required. Gibson, Chemist, Burton-on-Trent.

MANAGING Assistant, qualified, for a Light Retail and Dispensing business. State age, height, experience, and salary required, Mrs. Furnell, 357 High Street, Cheltenham.

JUNIOR or Improver for Light Retail and Dispensing; hours short. Apply, stating references, salary required, and enclosing carte, to H. T. Doub & Son, The Pharmacy, Tavistock.

WANTED, an energetic young man in Drug and Drapery business; to travel occasionally; single; indoors. Apply, stating salary and all particulars, B. B. Cowgill, Sowerby Bridge.

BY January 8th, an active Junior, to keep up stock and assist at the counter; total abstainer; indoors. State age, salary required, sending fullest references, to James Lees, Chemist, Watford.

JUNIOR Assistant or Improver wanted (outdoors); short hours and time for study. Apply, with photo, references, and salary required, to F. Christopherson, Pharmaceutical Chemist, Swaffham.

WANTED, an Assistant, first week in January; qualified; indoors. Apply, stating age, experience, salary, references, photo (to be returned), Manager, Apothecaries' Hall, 4 Oldquilt Street, Liverpool.

JUNIOR or Improver wanted immediately after Christmas (outdoors), moderate hours; no Sunday duty; two kept. Apply, stating full particulars, to W. Boor, Chemist, 1 High Street, Wisbech.

WANTED, Assistant, about 20 to 22, accustomed to General Retail and Dispensing (in or out doors). Apply, stating full particulars and salary required, Leppard, 20 Thames Street, Kingston-on-Thames.

WANTED, a qualified Dispenser for the Halifax Provident Dispensary, married man preferred; house free. Apply by letter, stating salary and references, to F. M. Batley, 69 High Street, Halifax.

WANTED, an Indoor Assistant, accustomed to a Mixed Business; also an Improver; must have good references. Apply, stating age, salary, and enclose photo, to J. Day, Chemist, Savile Town, Dewsbury.

AT once.—For small branch business in quiet little town, an Assistant to take entire charge; not necessarily qualified. Apply, stating age, experience, reference, and salary required, Wilsdon, Burford, Oxon.

WANTED a qualified Assistant to take charge of a well-established Dispensing establishment in Natal; good terms to a suitable man; three years' agreement and passage paid out, also board and lodging provided; aged 25 to 30. Apply, stating experience and qualifications, and naming salary expected, to "Natal," care of Messrs. Street & Co., Cornhill, London, E.C.

JUNIOR Clerk wanted, who has had experience in the Drug trade; must be a rapid and good writer and quick at figures. Apply by letter, giving full particulars; salary £40 per annum. L., 14 Bunhill Row, London, E.C.

WHOLESAL.—Wanted, a Junior Assistant at the Dry Counter; must have been apprenticed to the trade. Apply, by letter only, with full particulars, to Wyman & Westwood, 25 Charles Street, Farringdon Road, London, E.C.

JUNIOR or Improver, in Light Retail business; hours 8 to 8; comfortable home; must be good Dispenser, and obliging to customers. Send full particulars, salary required, and photo, to Cory, Chemist, Newport, Isle of Wight.

CLAKE & HUNT, Scarborough, will require early in January a qualified Assistant accustomed to best-class Retail and Dispensing. Applicants will oblige by stating age, height, previous engagements, &c., and enclosing photograph.

JUNIOR or Improver in a Yorkshire town; must be steady and reliable; enclose photo, which will be returned; state age, salary, in or outdoors. References and all particulars to "Bromidia," Messrs. Wyley & (Limited), Coventry.

WANTED, an Assistant for the Wet Counter; competent to make the various chemical preparations in the laboratory. State experience, length of time in last situation, salary required, &c., Slinger & Son, Wholesale Druggists, York.

FOR 5th January.—Assistant wanted; experienced in Retail and Dispensing; knowledge of Postal duties essential; aged 20 to 23. Apply, stating salary required and references, to X. X., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, Assistant, Minor qualification, immediately, for Light Retail and Dispensing business; in order to save time applicants will please state full particulars as to age, salary, character, &c., and enclose c.d.v. B. Cowgill, Chemist, Burnley.

WANTED, at once, competent Assistant, of good appearance and address; must be a quick and accurate Dispenser; indoors. Apply, enclosing card if convenient, with usual particulars, to Poole & Son, Dispensing Chemists, Newcastle, Staffs.

MANAGER required for Mixed business in country town; a thoroughly qualified man, well up in prescribing and accustomed to agricultural trade; indoors. Apply, stating salary required, &c., to Mrs. Atkinson, Much Wenlock, Shropshire.

A QUALIFIED Assistant, aged about 24; indoors; accustomed to a good-class Family and Dispensing business; hours 8.30 to 8, Saturdays to 10; no Sunday duty; half-day holidays on Wednesdays; salary £60; enclose photo. R. Wood, Chemist, Macclesfield.

WANTED, at Christmas, an Improver or Junior Assistant in a mixed General country business; no heavy trade; time for study allowed. Apply, with particulars (photo enclosed, to be returned), to Youngman, Pharmaceutical Chemist, Bury St. Edmunds.

QUALIFIED experienced Assistant for good-class Retail; outdoors; short hours; no Sunday duty; would occasionally be required to wait upon surgeons; aged 23 to 26; state particulars; send photo. 189/56, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WHOLESAL.—Wanted, at once, by a firm of Manufacturing Chemists, an Assistant Ledger Clerk. Must be a good writer and have a knowledge of the trade. Address, stating age, experience, and salary, to N. M., Office of THE CHEMIST AND DRUGGIST, 42 Cannon St., E.C.

HAMILTON, LONG & CO. (LIMITED), Chemists to the Queen, will have a vacancy for an Assistant at the Retail counter on January 1. Apply, giving full particulars as to age, height, experience, references, and salary required, to Dr. Hamilton, 3 Lower Sackville Street, Dublin.

WANTED, on December 28, indoor Assistant, competent to take charge. Apply, personally, any time except Monday afternoon from 1 to 6, or by letter, with full particulars as to height, age, references, salary and photo (to be returned), W., 44 High Street, Ecclestone Square, Victoria, S.W.

FOR the East.—First-class Assistant, qualified, with good all-round experience, capable of performing simple analyses and experienced in aerated-water making, for vacancy in large pharmacy in the East; liberal terms for a suitable man. By letter only, to Dakin Bros., 8/a Lendenhall Street.

EARLY in January.—An Assistant in a good-class Retail and Dispensing business; must be an accurate Dispenser and a good Counterman. Applicants will please give full particulars of previous experience, age, height, and salary required, and enclose photo, to D. T. Evans, Chemist, The Parade, Margate.

MELBOURNE.—Qualified Assistant wanted, aged 23 to 26 (3 years' engagement); passage paid out; sail end of January; must be good Dispenser; preference given to one able to extract teeth. Apply, giving references and full particulars, to "Melbourne," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

JUNIOR Assistant (indoors); hours 8 to 8, Thursdays 8 to 4, Saturdays 8 to 10.30; no Sunday duties; comfortable home offered; time arranged for study if required. Apply, stating age, height, salary required, references, &c., also if convenient send photo (to be returned), to W. Wilkerson, Chemist, Rushden, Northamptonshire.

JUNIOR; also qualified Manager.—Wanted, steady, trustworthy, pushing Junior, about 21; also another to manage Branch for a few months; one in whom implicit confidence can be placed as to the above; member of a church, and able to extract teeth preferred; indoors, comfortable home offered. Lookwood, Chemist, Otley, Yorks.

WANTED, soon after Christmas, a qualified Assistant to manage a country business in an agricultural district; must be thoroughly steady, energetic, and industrious, also accustomed to general trade; can reside in house; single preferred. State age, salary required, enclosing photo and references, to Arthur J. Chifney, High Street, Mildenhall, Suffolk.

SITUATIONS WANTED.

- A**S Junior; aged 20. "Gentlau," Alvechurch, near Redditch.
- A**S Assistant, or Dispenser to Surgeon; aged 27. J. E., 103 High Holborn.
- L**OCUM-TENENS; qualified; good references. "Loenn," Trinity Square, Llandudno.
- L**OCUM TENENS (23); F. H. Slyn, o/o W. W. Johnson, Chemist, Landrindol Wells.
- J**UNIOR, in good dispensing business; 4 years' experience. Ayre, Broad Street, South Molton.
- P**ART Time in London or Manchester; abstainer; qualified. Chapman, 5 Bailgate, Lincoln.
- T**EMPORARY; in or out doors; disengaged for Xmas. Davis, 73 Tabley Road, Tufnell Park, N.
- W**HOLE or part time Assistant (24); London preferred. "Sanitas," 47 Churen Street, Edgware Road.
- A**SSISTANT; aged 27; North of England preferred. Andrews, o/o Jopling, Chemist, Colechester.
- E**XPERIENCED Clerk desires re-engagement in January. Simpson, 61 Westbourne Park Road, London, W.
- A**SSISTANT (26); qualified; disengaged; London or North. "Instantan," The Nelems, Chingford.
- M**ANAGER, Dispenser, or Senior; qualified; experienced; references. "Beta," 415 Glossop Road, Sheffield.
- I**MPROVER; 3 years' excellent experience; salary £1 monthly. Mellis, 18 Marsden Street, Liverpool, E.
- A**SSISTANT or Manager; 30; qualified; married; permanency. M., 32 Lichfield Street, Hanley, Staffs.
- B**RANCH Manager; experienced prescriber; testimonials. J. T., 19 Hetley Road, Shepherd's Bush, W.
- A**SSISTANT; outdoors; 26; permanency; good experience. "Statim," 61 Northgate Street, Chester.
- A**SSISTANT; time for study; aged 20; 5 years' experience. Evans, 4 George Street, New Quay, Cardiganshire.
- T**EMPORARY or Permanent; aged 25; disengaged; qualified. "Extractor," 2 Horton Street, Lewisham, S.E.
- A**S Assistant; 6½ years' experience; highest references; outdoors preferred. T., 22 King Street, Hammersmith.
- A**S Manager of Branch, or for widow; Minor; aged 33. Late Manager for widow. F., Fern Cottage, Wilburton, Ely.
- J**UNIOR; 21; time for study preferred; London or suburbs. W. J., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.
- C**HEMIST; qualified; aged 28; good references. Apply, 44, 88, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.
- E**NERGETIC Assistant; unqualified; 36; single; abstainer; thoroughly experienced. "Hydrarg," 1 Selwood Place, Clevedon.
- F**RANCE.—Experienced Pharmaceutical Chemist desires situation as English Assistant in France. M., 85 Bishop's Road, Bayswater, London.
- A**SSISTANT; 21 years old; 5½ years' experience; immediate engagement wanted. Elphinstone, 46 Gower Place, near Gower Street Station.
- A**SSISTANT or Manager; 16 years' experience; good knowledge of Prescribing and Dentistry; married. "Assistant," 36 York Place, Edinburgh.
- M**ANAGER, Traveller, or Outdoor Assistant; 4 years in present situation; aged 34; married. E. J. Walker, 70 Beckenham Road, Beckenham.
- A**S Assistant or Branch Manager; middle of January; experienced; qualified; good references. Leytham, c/o Mortimer, The Mall, Clifton, Bristol.
- A**S Assistant (outdoors), or manage a branch; well up in Agricultural preparations; married; aged 46. "Pharmacist," 108 Bartholomew Street, Leicester.
- A**SSISTANT (21); accustomed to Dispensing, Prescribing, and Extracting; tall; highest references. J. R. H., 65 St. John's Road, Bootle, Liverpool.
- J**UNIOR; aged 18; 4 years' experience in first-class dispensing and agricultural business; disengaged January; references. "Rusticus," 15 George Street, Driffield.
- M**ANAGER, permanent or temporary; disengaged early in January; Pharmaceutical Chemist, exams. Head, care of Bradley, Chemist, Wisbech.
- A**S Traveller; gentleman (25), tall and of good address; connection; mineral-water trade, confectioners, and others. "Chemist," 65 Monmouth Street, Sheffield.
- C**HEMIST (qualified) wants situation in laboratory; aged 28; good references. Apply, "Laboratory," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

ASSISTANT; 34; qualified; moderate salary; disengaged. "Minor," 8 Castle Street East, W.

YOUNG Man, good appearance, speaks English and French, wishes engagement as Improver to Dentist; 3 years' experience; London preferred. Miss C. Ewerby, Bleasford, Lincoln.

PHARMACEUTICAL Chemist, managing for large firm; disengaged 19th; experienced Dispenser; good Salesman and Prescriber. "Pharmacist," 7 Brandon Terrace, Cheltenham.

TRAVELLER, Manufacturing Chemist, by gentleman aged 25; tall; good address; connection, South of England, Midlands, and Wales. "Chemist," 65 Monmouth Street, Sheffield.

TO Wholesale or Retail Druggists.—11 years with large firm, left to go in country; good character; experienced Pill Maker, Stock-keeper, &c. Clark, 225 Lancaster Road, Notting Hill, W.

MANAGER or Assistant (outdoors); temporary or permanent; 4 years in present situation; Minor; at liberty. "Statim," c/o Priest, 4 Charles Street, Lower Byrom Street, Manchester.

WANTED, a situation as Manager or Traveller; 25 years' first-class experience; aged 40; married; 14 years last reference. Address, "Statim," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street E.C.

WHOLESALE or Export; any responsible position; 11 years' excellent London and provincial experience; good all-round knowledge of business. B. O., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

ADVERTISER, from first English and American pharmacies, unqualified but thoroughly competent, requires position; branch management preferred; references. Alsford, 69 St. Peter's Terrace, Great Yarmouth.

DISPENSER.—A Lady of many years' experience desires situation; is also a careful housekeeper and could invest from £50 to £70 in the business; highest testimonials as to abilities. Address, "Beta," care of E. Lee, Coffee and Dining Rooms, 12 Seven Sisters Road, London, N.

ASSISTANT or Manager (outdoors); could take entire charge of quick-return business; energetic; thoroughly experienced Dispenser, Prescriber, Extractor; aged 30; height 6 feet; gentlemanly appearance and address; accustomed to good-class trade. W. R., 5 The Broadway, St. Margaret's, Twickenham.

AS Traveller.—Chemist's manager, aged 30, wishes situation, Drugs or Druggists' Sundries; good address; energetic; highest testimonials as to character and ability; first-class town and country family, dispensing and agricultural experience, in England and Scotland. 155/34, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MISCELLANEOUS.

ABOUT 40 gallons White Newfoundland (Medicinal) Cod-liver Oil; price 2s. 6d. per gallon in Leeds; samples on application. Benjn. R. Vickers & Sons, Oil Importers, Leeds. Terms cash, without discount.

TRAVELLERS on Commission wanted for East India and Australia, by largest French firm of Druggists and Herbalists; knowledge of the trade indispensable. Apply to "Traveller," Bureau de Poste 82, Paris.

TO STUDENTS.—A past Student has pleasure in recommending clean and comfortable apartments in close proximity to "Hills." Terms, which are moderate, will be forwarded on application to "Chemist," North Street, Bourn, Lincolnshire.

AGEN TS for Australia and New Zealand.—One of the most important firms in the South of France, manufacturers of Essential Oils, Essences, and Raw Materials for Perfumery, desiring to extend connections in the above countries, demand Agents. Offers, under O. G. F. 1757, to Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

ADVERTISEMENT FOR ALMANACS, &c.

ALL CHEMISTS and others publishing Almanacs, Price Lists, &c., are requested to send specimen copy, and state number issued and rates for advertisements, to H. H. Warner & Co. (Limited), 86 Clerkenwell Road, London, E.C., Proprietors of Warner's "Sa e" Remedies.

TO CHEMISTS AND DRUGGISTS.—Agents wanted in every town, where not represented, for Learner's Patent Foot-rot Composition; article much advertised, and a genuine one; £1,000 offered for Patent in 1890; any quantity of printed matter with Agent's name attached. Apply to the Proprietor, Alfred J. Learner, Crownthorpe, Wymondham, Norfolk.

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was the fault of the elements or what, but such a thing was either becoming scarce or going out altogether. Mr. Kirkby suggested that it was just possible that some of the earlier analyses of jalap-root had perhaps returned too high a percentage of resin, owing to defective washing of the resin, which he found required particular care. The percentage had been down as low as 3 and 4, and although at the present time jalap-root was occasionally met with that showed about 5 or 6 per cent., it certainly was a fact that the jalap in the market did not yield anything like the quantity of resin required in the Pharmacopœia. The meeting then closed.

FLORAL FORMULÆ.

AT the meeting of the Chemists' Assistants' Association last week, Mr. E. B. Sherlock read a paper on "Floral Formulæ and Floral Diagrams," which he illustrated with sketches and designs of the various figures used or proposed. Mr. Sherlock said that the attempts to establish a symbolic notation to do for botany what the chemical notation had done for that science have always been unsuccessful, and it is not difficult to understand why. A plant yields morphological elements—stem, leaf, root—a chemical compound the elements of which it is composed. We can split up botanical elements into cells, just as we can theoretically split up chemical elements into molecules and atoms. We sort out our atoms into seventy groups, the elements, sharply differentiated from one another; but the botanical atoms, the cells, would not lend themselves to this proceeding. We attempt to classify them as parenchymatous, prosenchymatous, and so on, but these groups so merge into each other that it is impossible to draw a line of demarcation. We can see, therefore, that instead of seventy only, such heterogeneous material offers an infinite variety of forms, so that it is impossible to build up a system of botanical elements.

It is unfortunate that so many systems have been introduced, but the general employment of formulæ and diagrams is sufficient evidence of their value, and an acquaintance with the principles on which they are built is expected from anyone having pretensions to botanical knowledge. Candidates for the pharmaceutical examinations are often questioned on these points, and Mr. Sherlock said he would feel amply repaid if by writing this paper it should prove of service to them.

The earliest attempts at the construction of floral formulæ were very crude and clumsy. Bergeret tried to represent floral characters by different letters, and, twenty-six not being sufficient, had to use the same letters more than once, adding numerals to distinguish them. Cassel employed Roman numerals to mark the number of similar organs in a group and Arabic numerals to show the relationship between different groups. Others, again, used dualytical signs to replace description, but of these De Candolle said: "Their forms are so strange that the formula of a genus resembles a hieroglyphic tablet of the ancient Egyptians." Bayer employed different letters to denote different portions of the plant, but the number he employed to represent merely the several species of the same genus exhibited such variety that the extension of the system to plants in general was obviously as unwieldy as the rest. A. de Jussieu used the initial letter of the name of the organ, adding the corresponding Greek letter if that recurred. Van Sieghem used the letters S, P, E, C, preceded by numerals, to denote the floral whorls and the number of parts in each, and repeating the number with an index, if more than one whorl of similar organs were present. Superposition was shown by placing a small letter for the outer whorl at the base of the capital letter for the inner whorl, attachment of organs being denoted by brackets thus:—

Primula [5-] + 5P + 5E; + [5C].

More modern systems are generally modifications of that employed by Sachs in 1833. Here K, C, A, G, are used for the whorls, and figures after the letters for the number of parts in each. Where the whorls are distinct a + sign is placed between the figures, and an absent whorl is denoted by the sign 0. Superposition is indicated by a vertical line

between the parts concerned, and branching (*e.g.*, of stamens) by a numeral placed as an index; thus $A3^2 = 3$ stamens each with two branches, $A5^7 = 5$ stamens with several branches. Henfrey uses the letters S, P, A, G, arranged in two vertical columns, with a straight line between to show superposition, and curved ones for attachment. A numeral, denoting the number of parts in the typical whorl, is placed outside the formula, together with the letter F, to show that a flower is referred to. Thus for *primula*:—

$$F5 = \begin{array}{|c} P \\ A \end{array}$$

The letters standing for the floral organs are numerous. Calyx may be taken as a whole, and indicated by K (Ger. Kelch) or C, or it may be considered as made up of sepals when the letter S is used. For the corolla we have C or P (made up of petals) and Per. (Perianth); for the andrœcium A, An, St, and E (Fr., Étamine), and for the pistil G, Gy, and C. Thus C does duty for three out of four whorls, and P has two distinct meanings. To be consistent, we should either retain all through either the letters indicating the floral whorls themselves, or those standing for individual numbers, hence such a formula as S, P, An, Gy is not desirable. It would be best to use a sign for each floral leaf, as is done by Goebel, whose work, "Outlines of Classification and Special Morphology," was referred to as presenting the most rational of the systems yet employed for denoting peculiarities of position, cohesion, abortion, &c., in the parts of a flower.

Mr. Sherlock then proceeded to speak of symbols indicative of sex, time of flowering, &c., but cautioned his hearers against too frequent use of such symbols as tending to confusion.

In the second part of the paper Mr. Sherlock dealt with floral diagrams. This it is impossible to adequately report, as throughout the author used diagrams in such a way that only by hearing him could one follow him intelligently. In the course of his remarks on this subject the author had a good deal to say about modern theories of the flower, and it was the general and expressed opinion of the meeting that he had handled a difficult and somewhat dry subject in a bright and fascinating manner.

TRADE-MARKS APPLIED FOR.

THE *Trade Marks Journal* publishes the following notice:—"Any person who has good grounds of objection to the registration of any of the following marks may, within one month of the date of this journal give notice in duplicate, at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1890, of opposition to such registration." All communications to be addressed to H. Reader Lack, Esq., Comptroller General, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

(From the "Trade Marks Journal," December 9, 1891.)

"RODINAL"; for chemical preparations used in photography. By Actien-Gesellschaft Anilin-Fabrikation, Berlin. 159,372.

"KOPP'S LIVER PILLS" and portrait; for liver pills. By Köpp & Lichtenberger, 1516 W. Baltimore Street, Baltimore, U.S.A. 158,314.

"NEURAKOS" and "PECRAKOS," and signature; for medicine for human use. By Edmund Jones, Medical Hall, Miles Bank, Hailey. 158,426, 158,427.

"DARWIN & Co." as signature; for medicines. By H. F. D. Gisborne, trading as Darwin & Co., Market Street, Reading. 158,905.

"COUGH TINCTURE," other wording, and signature, on label; for a cough medicine. By A. A. Bones, trading as Thomas Lovett & Co, High Street and Broadgate, Coventry. 158,923.

"MUSTARD OIL," other wording, and signature, on label; for medicinal mustard oil. By W. H. Snow & Sons, 86 and 88 Wakefield Road, Bradford. 159,434.

"COLUMBA BOUQUET," picture of steamship, and wording, on label; for perfumery. By J. Sturrock, trading as Sturrock & Sons, 123 Buchanan Street, Glasgow, and 66 Regent Street, London. 157,837.

Personalities.

WE had a call last Saturday from Mr. Thomas Stephenson, F.C.S., of Kemp & Co. (Limited), Bombay, who is home on a short holiday.

THE will of the late Mr. Thomas Hyde Hills has just been proved at 99,554*l.* 18*s.* 2*d.* gross, and at 98,057*l.* 7*s.* 8*d.* net. Fuller details will be given next week.

MR. W. STONES, of Messrs. Jewsbury & Brown, pharmaceutical chemists, Manchester, has given a herbarium to the Manchester Pharmaceutical Association to be competed for by students as the council of the association shall see fit. Arrangements for the competition will be made shortly.

MR. FRED. REYNOLDS, Leeds, has brought out in pamphlet form a series of humorous sketches "On the Press of Leeds," with shorthand comments. The jokes are mostly local, and are, therefore, mostly lost on barbarians outside Leeds, but we note that Her Majesty the Queen has graciously refused to accept a copy, as she does not understand shorthand.

MR. E. ALFORD WALLACE, who has been connected with the *European Mail and Colonies and India* for the past twenty-three years, and has edited the former paper for a good part of that time, has just opened a colonial news agency and a colonial advertising agency at Temple Chambers, E.C. Mr. Wallace has an exceptional acquaintance with colonial requirements, and his wide experience should be very useful to the colonial and British press.

MR. HENRY S. WELLCOME returned last week from Boulogne, where he had been conducting inquiries on behalf of the family of the late Mr. Archibald McNeill, the mystery of whose sudden disappearance a year or two ago Mr. Wellcome was the means of clearing up. He has always had the idea that Mr. McNeill was murdered and has accumulated some important facts which are now in the hands of the judge d'instruction. We understand that Mr. Wellcome had to work against considerable official opposition, but through Lord Salisbury's influence the latter got the judge d'instruction to take up the matter in a business-like way.

Trade Notes.

"VENICE IN LONDON" at Olympia is to be disinfected by the Sanitas Company.

IN Messrs. Anderson & Co.'s DIARY advertisement, p. 228, the name of the street is incorrectly given: it should be "Murano." Users of the DIARY will please delete the "d."

WE understand that Messrs. H. H. Warner & Co. (Limited), 86 Clerkenwell Road, E.C., are open to negotiate with chemists for advertising space in their price-currents and price-lists.

MESSRS. BEECHAM are now supplying a very interesting lithographed show-card giving representations of the exterior and interior of their palatial pill-factory at St. Helens. We notice, too, that they are introducing a 1*s.* tooth-paste. It will be interesting to see if they can make a second big success.

WE have the best authority (Mr. Barratt himself) for saying that the statement made by the *Financial News* that the firm A. & F. Pears is to be converted into a limited company, is entirely without authorisation. Nothing of the kind has at present been determined upon.

OWING to an oversight, Messrs. Marion & Co.'s page in the DIARY (19) went to press without some corrections being made in regard to the sizes and prices of their dry plates. These, it should be noted, are of three rapidities, and the sizes and prices are as follows:—

Ordinary	4½ in. × 3½ in.	1 <i>s.</i> doz.	9 cent. × 12 cent.	1 <i>s.</i> 3 <i>d.</i> doz.
Rapid	"	1 <i>s.</i> 3 <i>d.</i>	"	1 <i>s.</i> 6 <i>d.</i> "
Instantaneous	"	1 <i>s.</i> 6 <i>d.</i>	"	1 <i>s.</i> 10 <i>d.</i> "

SPATULA PEN AND PENOL HOLDER.—This is a pretty little trifle brought out by Messrs. Burroughs, Wellcome &

Co. They are nickel-plated spatulas with a penholder and filled pencil in the handle. Chemists might certainly distribute a few among medical men to advantage. They are supplied by Burroughs, Wellcome & Co. at 6*s.* per dozen, subject to usual discounts, a price which we understand is below cost. The only benefit accruing to the firm is an advertisement engraved on the blade.

GRINDLEY & Co. (LIMITED), of Poplar, again submit to us samples of their Pioneer brand of petroleum jellies. The paraffinum molle, B.P., is, perhaps, the most interesting specimen at the present time. This is a nice soft preparation of amber colour. They have improved this jelly since we last noticed it, and in reply to a straight question their representative told us that they make the jelly from an English petroleum, the source of which they ask us not to publish, and they claim that the jelly is a true residue purified by filtration.

SINCE we noted the introduction of the Johannis natural mineral water into this country it has become quite a familiar object on dinner-tables. It has, therefore, justified our prediction that the enterprise of the company would be successful. We notice that a commissioner of the *Lancet* has recently visited the Johannis spring, at Zollhaus, and sent a very flattering report of the whole arrangements. The natural gas of the water is collected just before it comes to the surface of the water, and is stored in gasometers. The water thus freed from the excess of the gas is allowed to stand in the air to permit of the oxidation and precipitation of the ferrous hydrocarbonate. After this the water is again charged in a very unusual manner, the water being allowed to trickle down a tower filled with broken glass, and as it goes down it meets the carbonic acid. In this way the water is thoroughly charged with the gas, and obviously no metallic contamination can possibly take place, a feature which is distinctly worthy of emphasis. The gas yielded by the spring is far in excess of what is required for purpose of aeration at the works, and the surplus is condensed and exported in the liquid form. The gas is of exceptional purity, coming out at 99.9 per cent. CO₂. Of the analytical data we need not speak at great length. "Johannis" is a remarkably pure water, containing a little over 1 of solids in 1,000, these being alkaline carbonates with a trace of lithia. The *Lancet* states:—"The view that has been held by engineers—that natural waters charged with natural carbonic-acid gas retain the gas, and hence the pleasant taste, for a longer period than manufactured mineral waters—finds confirmation" in their own experiments.

MESSRS. W. J. BUSH & Co., Artillery Lane, E.C., have just issued a circular to the mineral-water trade in regard to the action of vestry authorities anent the presence of lead in aerated water. The object of the circular is to show that the trace of lead (0.003 to 0.006 per cent.) in commercial citric and tartaric acids is immaterial, and beverages made with them cannot be injurious to health, as an ordinary bottleful would contain only 0.00096 grain of lead. In support of their contention they have obtained the opinions of Professor Attfield and Dr. Meymott Tidy. The former says:—

Let us, for convenience of calculation, assume that the aerated beverage contains slightly more than 0.00096 of a grain of lead per bottle—that is to say, 0.001 of a grain, the thousandth of a grain. Then, obviously, one grain of lead would be contained in 1,000 such bottles. Now, a medicinal dose of a lead compound, soluble in such fluids as aerated beverages, is one to four grains. The amount of lead in such a single dose will be rather above half a grain to two grains. A medium dose would include one grain of lead. So, then, a person drinking the lemonade you mentioned would have to swallow 1,000 bottlefuls before he would have swallowed even a single medium medicinal dose of lead. How many thousands of bottlefuls he would have to swallow before he could do himself harm would be difficult to estimate; for very much larger doses than the foregoing—doses frequently repeated—have been swallowed without any harm ensuing.

Dr. Meymott Tidy's reply was:—

I have no hesitation in saying that such a quantity of lead in an aerated beverage would neither be dangerous nor injurious to the health of a person drinking the water. It would be little short of sentimental absurdity to suggest that any person is likely to suffer from the ingestion of any reasonable quantity of such water.

These opinions should be used with advantage in courts of law.



THE TRADE-MARK
"BRITANNIA."

IN the Court of Appeal on Monday, December 14, Lords Justices Lindley, Bowen, and Fry heard the appeal of Messrs. Hodgson & Simpson, of the Calder Soap works, Wakefield, from the decision of Mr. Justice Chitty, that the word "Britannia" was not capable of being registered as a new trade-mark under the Act of 1883, and directing it to be removed from the register. The plaintiffs had asked for an injunction against Messrs. James Sinclair & Son, 65 Southwark Street, infringing marks taken out by them in respect of perfumery, toilet articles, &c., one mark consisting of the word "Britannia." There was a cross-action by Messrs. Sinclair to get it struck off the register. The plaintiffs had found in Mr. Whiteley's catalogue "Sinclair's Britannia Bouquet Soap." Mr. Justice Chitty was of opinion there was nothing fanciful in the word "Britannia" considered by itself; and it was not obvious to a person of ordinary intelligence that it could not be intended to designate the place where the goods were produced or were used.

Mr. Byrne, Q.C., and Mr. Israel Davis were counsel for the appellants; Mr. Jenkins was on the other side.

Mr. Davis explained that the marks were registered in 1886. The first was the word "Britannia" by itself; the second was the figure of Britannia with certain additions; and the third was a figure of Britannia slightly different to the other. The first question was whether there was a contract between the parties for good consideration that the defendants would not use any of the marks. Before the litigation was commenced the defendants agreed they would not continue to use them if the plaintiffs would give them two months in which to sell out their then stock of labels. The correspondence showed that Mr. Justice Chitty held in the course of the arguments there was no contract.

Lord Justice Lindley: Was not this a compromise?

Mr. Jenkins submitted not, as there had been a misapprehension on both sides. It turned out that the plaintiffs had no legal rights. His clients were unaware of that at the time. The mistake was discovered owing to a conversation a clerk happened to have with the Comptroller-General of Patents.

Lord Justice Bowen: Is it not the case of the opossum up the gum-tree: "Don't fire, and I'll come down"?

Mr. Jenkins: Probably the opossum would not have come down if he had subsequently discovered the gun was not loaded. (Laughter.) The point was not pressed in any way in the Court below. The judge simply said, I am against you.

Mr. Davis argued if there was a contract such as he contended for, the defendants could not be aggrieved at the presence of the word "Britannia" on the register.

Lord Justice Lindley: They must be aggrieved, because if you went to a jury for breach of contract and you had no right to be on the register it would make a very considerable difference as to damages.

Mr. Davis said it must be a legal and not a sentimental difference.

At this point the Court adjourned. Afterwards Mr. Jenkins stated that the parties had come to an arrangement. After what had fallen from their lordships with respect to certain letters the defendants felt whatever their strict legal rights might be, they would not like to carry the case further. They, therefore, would take an order discharging the orders of Mr. Justice Chitty, and would submit to a perpetual injunction as to the infringement of the particular trade-mark

and pay a nominal sum for damages. There would be no costs on either side.

Lord Justice Lindley expressed satisfaction at the result.

SPIRIT OF NITROUS ETHER.

At the Thames Police-court, on December 11, Christopher Pelham Maitland, chemist and druggist, of 233 East India Dock Road, appeared to answer a summons, taken out by the Poplar District Board of Works, under the Sale of Food and Drugs Act, for selling spirit of nitrous ether deficient in nitrous ether. Mr. George Hay Young, solicitor, prosecuted. Mr. A. Shadrake, sanitary inspector to the Poplar Board of Works, stated that on November 9 he purchased 4 oz. of spirit of nitrous ether at defendant's shop. After completing the purchase, witness told the shopman that the spirit was to be analysed by the public analyst. He now produced the analyst's certificate showing the spirit to be deficient in nitrous ether to the extent of 40 per cent. Defendant, in answer to the charge, said that spirit of nitrous ether was the most variable article that could be sold in a chemist's shop. It was almost impossible to get it at the proper standard, as it evaporated every time the bottle was opened, and especially so in his neighbourhood, where the drug was sold in very small quantities. The spirit would gradually evaporate to the extent of 40 per cent. Mr. Kennedy considered that the justice of the case would be satisfied by defendant's paying the costs—17. 3s.

SALE OF A CHEMIST'S BUSINESS.

ON Tuesday, in the City of London Court, the case of Orridge & Co. v. Patman, came before Mr. Commissioner Kerr by way of an application to grant leave to appeal. The facts were reported in THE CHEMIST AND DRUGGIST of November 21, the plaintiffs Messrs. Orridge & Co., of Ludgate Hill, E.C., suing the defendants to recover commission amounting to 15% on the sale of a chemist's business. The defendant had placed his business on the books of the plaintiff as well as on those of another firm. He had paid the commission to the other firm, who claimed to have introduced a purchaser. The plaintiffs sought for the commission, setting up an agreement which the defendant had signed by which he agreed to pay the plaintiffs if the business was sold while on their books. Mr. Commissioner Kerr held he was bound by that agreement, and found for the plaintiffs, with costs.

Mr. Rawlinson, on behalf of the defendant now asked for leave to appeal. He understood that leave was given, but there seemed to be a misunderstanding.

Mr. Spencer, for the plaintiffs, said he did not mind the defendant's appealing, but he should insist upon the terms which the Judge originally imposed being observed that they should have costs on the higher scale.

Mr. Commissioner Kerr said he remembered that, and that the defendant at the trial abandoned the appeal. He could not help the defendant now.

Mr. Rawlinson offered to pay the costs on the higher scale if he could get leave to appeal.

Mr. Commissioner Kerr said it became a question whether he could give leave to appeal now. Was the agreement used by the plaintiffs one generally adopted in the chemical business?

Mr. Spencer said so far as he knew it was not, although it was possible other firms might use something of the sort.

Mr. Commissioner Kerr thought the defendants had better drop their idea of appealing and say nothing more about it; but afterwards he said while he would refuse this application with costs, it might be made on a subsequent day if the defendants were so advised.

AN ACTRESS SUES A CHEMIST FOR DAMAGES.

At a Small-Debt Court held in Wishaw, Lanarkshire, on December 10, a curious action was raised at the instance of Mrs. Walter Bentley, the well-known actress, against Mr. T. B. Macfarlane, chemist, of Wishaw. The pursuer claims 12% as the value of a Pomeranian dog belonging to her, which she alleges had been poisoned under the following circumstances, as set forth in the summons:—"The dog being ill,

the pursuer, on or about October 5, 1889, through a servant, purchased from the defender certain pills, which in knowledge of the purpose to which they were to be applied—viz., administration medicinally to the dog—were represented to be perfectly harmless, and to be what are known as sulphur pills. On administering one to the dog, it was almost immediately seized with violent spasms, and died within little more than an hour. The pursuer, therefore, holds that the pills were not of the kind represented, but, in fact, of a deadly poisonous nature, and the one administered caused the dog's death. The dog was of considerable value, and besides being a good watch—a thing necessary to pursuer—it was trained to perform on the stage."

Mr. W. B. Thomson, defender's agent, said he was entitled to a little more information than was contained in the pursuer's statement. He would like to know where the dog had died. It was necessary that that information should be supplied, in order that he might properly prepare his case.

Mr. James W. Turnbull, who represented the pursuer, said the dog died in Wishaw, but he could not state positively. He asked for a continuation of the case, as Mrs. Bentley was unable to appear, being then in Stirling. She further averred, he said, that one of the pills complained of was given to another dog, and that it died also. One of the pills had also been analysed.

Mr. Thomson said the defence was a general denial of the pursuer's averments.

Sheriff Mair said he would continue the case till December 31, on the understanding that pursuer's agents wrote to Mr. Thomson letting him know where the dog died, and what cemetery it was interred in. (Laughter.)

MINERAL-WATER BOTTLES AND THE MERCHANDISE MARKS ACT.

AT Thames Police-court on Monday, Isaac Hostler, a mineral-water manufacturer, of Matilda Street, St. George's, was summoned under the Merchandise Marks Act for selling aerated waters in eight bottles with the registered trademark of R White & Co. A previous conviction for a similar offence was proved against defendant, and Mr. Mead committed him for trial.

THE FOOD AND DRUGS ACT AND LABELS.

AT Tuesday's meeting of the St. Luke's vestry, the clerk (Mr. G. W. Preston) said he had received a letter from Mr. Adrian, assistant secretary to the Local Government Board, stating that the Board did not see that they could interfere with a decision of Mr. Bros, magistrate at Clerkenwell, who had dismissed a summons for adulterated coffee, because on the wrapper was a small stamp saying that the contents were a mixture. The Local Government Board added that, if the vestry thought the magistrate's decision bad in point of law, they could ask him to state a case for appeal, and, with regard to the wrapper, the Board referred the vestry to the cases of "Liddiard v. Reece" and "Horden v. Meddings," reported on pages 233 and 234 of 44 J.P. The vestry received the letter without comment.

BANKRUPTCY REPORT.

Re T. R. JACKSON, 405 and 406 High Street, Cheltenham.

THIS bankrupt is described as a wine merchant and provision dealer. His business, known as Jackson's Co-operative Stores, has been a general one. He commenced business in 1868 with a capital of 45*l.*, and in 1886-7-8 his turnover exceeded 40,000*l.* a year. In 1889 it dropped to 16,000*l.* Since then no balance-sheet has been made. He attributes his present position to the falling off of trade in the town and to keen competition.

Re ALEXANDER SYDNEY RAMAGE, Wolverhampton,
Manager to Manufacturing Chemists.

A PETITION has been filed in the Wolverhampton County Court, and a receiving order made, in the matter of the above

debtor, who has been residing at 41 Waterloo Road North, Wolverhampton, and previously at Accrington, Walthamstow, Beotie, Widnes, and Frodsham.

Mr. W. A. Green has been the solicitor acting in the matter, and the public examination was fixed for December 15.

Re THE NORTHWICH SALT COMPANY (LIMITED).

THIS company was formed in February, 1889, to acquire 27 acres of freehold land near Chester, with the salt deposits and other minerals underlying, and to erect thereon works for raising and manufacturing salt and other products. The promoters of the company were the National Debenture and Assets Corporation (Limited), which company was ordered to be wound up last April. The remuneration of the directors was fixed at 400*l.* per annum, and was payable from the date of registration. The nominal capital of the company was 100,000*l.*, originally divided into 20,000 5*l.* shares; but debenture capital to the extent of 20,000*l.* was also created. The purchase price was fixed at 84,000*l.* payable as to 10,000*l.* in debentures, 60,000*l.* in fully-paid shares, and 14,000*l.* in cash. The directors went to allotment in February, 1889, upon a subscription of 15,115*l.* More shares were subsequently issued in response to later prospectuses, making, with the 12,000 shares allotted to the vendor, a total issue of 14,253 ordinary shares. The vendor is stated to have been paid 11,750*l.* of the cash consideration of 14,000*l.*, and is now scheduled as a creditor for the balance. It is stated by Mr. E. L. Clarke, one of the directors, and apparently the real vendor, that he purchased the property acquired by the company from his father-in-law for 5,400*l.* in cash, and resold it to the National Debenture and Assets Corporation for 27,000*l.* in cash and shares. A winding-up order was made against the company last August, and accounts have now been furnished showing gross liabilities 29,255*l.* 11*s.* 6*d.*, of which 16,128*l.* 6*s.* 6*d.* are expected to rank; assets, 13,151*l.* 14*s.* 10*d.* (subject to a charge of 12,961*l.* 14*s.* 10*d.* to the debenture-holders); and an estimated deficiency to the contributories of 95,063*l.* 16*s.* 8*d.*

Re THE THAMES COLOUR AND VARNISH CO. (LIMITED).

THE first meetings of the creditors and shareholders of this company were held on Wednesday last before Mr. Wheeler, an assistant-receiver under the Companies' Act.

The company was formed in December last with a capital of 5,000*l.*, divided into 1*l.* shares, to acquire the business formerly carried on by Mr. Eugène Hirsch, under the style of "The Thames Colour Co.," together with the stock-in-trade. The business was carried on at a small profit for the first six months; but the subsequent trading resulted in a considerable loss, and on September 2 a winding-up order was made upon the petition of contributories. The accounts filed under the proceedings show debts, 592*l.* 8*s.* 1*d.*; assets, 707*l.* 8*s.* 10*d.*; and a deficiency to the contributories estimated at 913*l.* 19*s.* 3*d.* The chairman stated that the stock-in-trade had been sold by auction, and had realised considerably more than the amount shown in the accounts. The book-debts were being collected, and he fully expected that the creditors would be in the happy position of receiving payment of their debts in full.

The meeting decided to leave the estate in the hands of the Official Receiver, to be dealt with in the usual manner.

Re THE CATHEDRAL STORES (LIMITED), Canterbury.

Meetings of the creditors and shareholders of this company were held last Saturday at Ridler's Hotel, Holborn, before Mr. T. Easton, acting for the East Kent Official Receiver. The company was formed in July last to acquire a business formerly carried on by Mr. Lewis Solomons at Canterbury, and, after a brief existence, a winding-up order was made against it. The liabilities amount to about 2,500*l.* The interests of the meetings were conflicting. Mr. Izard, trustee of Solomons' estate, at the creditors' meeting proposed Mr. George White, 14 Old Jewry Chambers, as liquidator, with the Official Receiver as a committee of inspection. Mr. Piesse, for the petitioning creditors, supported the nomination. Mr. Strouts, for Mr. Melling, the

promoter, on the other hand, asked for the Official Receiver to be appointed, and stated that his client claimed 1,190*l.* from the estate. They had not been able to tender a proof in time for the meeting, but, he contended, their wishes ought to have some weight. The chairman pointed out that no proof having been tendered, Mr. Melling could have no voting power, but as the appointment would have to be confirmed by the judges, an opportunity would then be afforded to oppose it. A sitting will be applied for, in order to publicly examine the directors and officials concerned in the formation of the company and the business transactions.

MARRIAGE.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

MATTHEW — WRIGLEY.—At Wath-upon-Deane Parish Church, by the Vicar, the Rev. H. Partington, on December 1, John Ewen Matthew, chemist, Hoyland, to Hannah Walker Wrigley, eldest daughter of Mr. James Wrigley, Hoyland.

DEATHS.

BEHRMANN.—Mr. Joachim Behrmann, until recently senior partner in the Hamburg wholesale drug firm of Behrmann & V. Spreckelsen, died on November 29, after a long and painful illness, at the age of 69 years. Mr. Behrmann came from an old Hamburg family, and was apprenticed to the drug trade at an early age. He started the firm of Behrmann & V. Spreckelsen in 1849, his partner soon afterwards becoming his brother-in-law also. From the beginning the firm carried on business as retail and wholesale druggists. They soon purchased a mineral-water business also, which, however, was an exceedingly small and primitive concern at that time. Mr. V. Spreckelsen withdrew from business a few years ago, Mr. Behrmann not until January 1, 1890. The deceased gentleman leaves a widow, three sons, and one daughter. One son predeceased him not long ago. Mr. Behrmann took an active part in public life, and, while Hamburg was yet an autonomous State, he was for many years a member of the lower, or *Bürgerschaft*, branch of the Legislature. When, in 1872, the German Druggists' Union was established, Mr. Behrmann was at once elected to a place upon its executive, which he occupied until the time of his death.

CRISP.—At Pittenweem, Fifeshire, on December 10, Mr. David Crisp, chemist and druggist, and inspector of poor for the parishes of Pittenweem and St. Monans. Aged 47.

FARMER.—On December 8, at High Street, Putney, Mr. John Farmer, chemist (since 1830), in his 87th year.

HUTTON.—In the *Linlithgowshire Gazette* of December 12 an interesting notice is copied from the *Cape Times* of Mr. Thomas Hutton, a native of Linlithgow, and a chemist and druggist, who died lately at Cape Town, at the age of 49. As a youth he was sent to Edinburgh to study for the ministry, but not finding theology congenial, he entered the service of a well-known chemist, and in the course of time was turned out a full-fledged chemist and druggist. His Bohemian disposition, however, tempted him into the wide world, and he took part in the Franco-Prussian war of 1870, and spent a considerable portion of time in France. Later on he participated in the Russo-Turkish war, where he was captured and suffered many weeks' imprisonment. At this stage of his career he figured as a journalist, contributing well-written articles to several leading British newspapers. Next he wandered to South Africa and making his way to Kimberley, which was then in its infancy, he opened a chemist's shop, which business he conducted most successfully for a number of years; but the spirit of rambling, or rather the force of habit, was too strong, and again he resumed his travels, visiting all the interesting parts in South Africa which were known. He experienced the ups and downs of life to a great extent, at one time having a good balance at his bankers, and at another having to take to the road for want of a lodging; but his pluck and determination always pulled him through, and success eventually attended him. He was auctioneer, law-agent, sign-painter, printer, broker, &c., as the case might be, but in no instance, rich or poor, was he ever known to swerve from the path of honour. On one occasion he was

ruined in Kimberley through signing accommodation bills for a so-called friend, and on another lost all by a conflagration. A year or so ago he came to England, and having made arrangements with a leading firm of printers in London, he returned to Cape Town with a valuable printer's plant, and opened a place of business as publisher, printer, and bookseller. He soon acquired a profitable connection, and was on the outlook for larger premises, when unfortunately death terminated his eventful career. Mr. Hutton was respected by all who were acquainted with him. While in Kimberley he married a lady who (together with eight little children) survives him and mourns his untimely end, and for whom the greatest sympathy is felt.

ROSE.—On December 13, suddenly of heart-disease, Mr. Alfred Rose, pharmaceutical chemist, 441 Edgware Road, London. Aged 49.

SANGSTER.—On December 8, at his residence, Irvine Place, Aberdeen, Mr. John Sangster, pharmaceutical chemist. Aged 72 years. Mr. Sangster, who retired from business about three years ago, was a bailie of Aberdeen, and served on the Town Council for many years. He was elected Dean of Guild in 1879, and held that office for five years. He leaves a widow, but no family.

SKIRROW.—At Crow Nest Villas, Bingley, Yorks, on December 6, Mr. William Edward Skirrow, chemist and druggist. Aged 67. The deceased gentleman was one of the best-known business men of Bingley, having been connected with the town for nearly half a century. He served his apprenticeship to the drug trade with the late Mr. Dunn, in the shop in Main Street, owned and occupied by himself for about forty years. His quiet cheerfulness, readiness to oblige, and assiduous attention to business were conspicuous through his entire career. He retired from business about a year ago, transferring it to his son, Mr. William Skirrow. He served his townsmen in several capacities, and was a consistent supporter of the Baptist Church. The deceased was laid to rest on Wednesday last week, an impressive service being conducted in the Baptist Church.

M. JEAN STAS, the famous chemist, has just died at Brussels, aged 79. He was for fifty years a member of the Belgian Royal Academy of Science, and was the author of several important works. Chief among them was his "*Recherches sur les Poids Atomiques*," which won him the gold medal of the Royal Society of London, and we cannot rank as inferior to that his work in regard to the isolation of alkaloids. His evidence led to the condemnation of Vicomte Rocarme, in 1850, for poisoning with nicotine.

DEED OF ARRANGEMENT.

The following deeds of arrangement with creditors have been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1857. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision, in the Act making any of these arrangements binding upon dissenting creditors

Langdon, Charles Vivian, 15 The Terrace, Market Jew Street, and The Arcade, Penzance, Tea Dealer and Druggist. Trustee, Frank Fletcher, Obiswell House, Finsbury Pavement, E.C. (I.A.). Dated, December 9; filed, December 15. Unsecured liabilities, 255*l.* 6*s.* 10*d.* Estimated net assets, 275*l.* The following are scheduled as creditors:—

	£	s.	d.
Harrison & Crossfield	27	15	5
Higgins, E. J. & W.	12	0	0
Sequal (Limited), London	28	0	0

(And thirty-three under 10*l.*)

Preferential.

Gas Co. (Limited), Penzance	2	0	0
Moucr, Mr., Torquay	37	10	0

SELLS FURIOUSLY

Wherever it is shown, and sets going at once a demand for Chemicals and Apparatus.

CHEMISTS should stock "Scientific Mysteries" at once. Boys coming home for the holidays will refuse nourishment until they are provided with a copy, after once seeing the book. We have been supplying the books at the rate of

A Thousand per Day.

Last week we got blocked for a few days, as we had run out of stock. Just at this season printers and binders have their establishments so crammed full of work that they become almost

Unapproachable.

But the difficulty was not an ordinary one. Great houses saw that a national calamity was pending. The world was just then

Creaking on its Axis

because the ordinary supply of vaseline had been limited. But if "Scientific Mysteries" were cut off, the Christmas of 1891 would have been gloomy and cheerless. Pears' "Christmas Annual" had been read, admired, assimilated, laid aside. Mr. Stead's "Ghost Stories" had left a foggy, clammy atmosphere, the dreariness of which only the

Bright Light of Science

could dispel. As we said, several great houses grasped the situation, and like the banks last year when the Baring spectre appeared, they came to the rescue. Messrs. Spottiswoode, the printers, and Messrs. Fisher, the binders, said—

Christmas must be Saved,

and in the dead of night, their mighty machines ground forth the gorgeous volumes. By Tuesday last all danger of a revolution was at an end, and the City policemen were, with joyous hearts, clearing the streets for the vans which were distributing the precious hurdens to the wholesale agents. Of course, a victory like that cannot be won without cost, and we know the production of the work must have involved

An Enormous Strain,

but it is not quite fair to charge on us the whole of the responsibility for the bookbinders' strike. The bookbinders have got their eight hours' day, and, of course, up goes the cost of binding. We are quite accustomed to that. The employers, when they get the worst of a strike, present themselves before the public as objects for compassion; but while the upper classes are lavishing their pity on them, they themselves are busy transferring their burdens on their

clients. So wags this wicked world. But what we wanted particularly to explain was that whatever Mr. Longman, Colonel Routledge, and

The "Times" Newspaper

may say, that bookbinders' strike was not occasioned by "Scientific Mysteries" alone. Having freed ourselves from any stigma on that account, we can now proceed without a stain upon our character. A little previously we referred to "Scientific Mysteries" as a gorgeous volume. The expression fitted into the sentence neatly; but we should like to explain here that it was

Merely Rhetorical.

"Scientific Mysteries" is not a gorgeous volume; but it is a very pretty little hook of 100 pages, with a cover in colours, of which the engraving in the middle of this essay is a dull and reduced reproduction. Inside, it describes with clearness nearly 200 experiments, and is illustrated with over 80 engravings, which, like the Royal Academy Exhibition, are of varying degrees of artistic excellence. All of them, however, have the merit of explaining the processes and performances detailed. We are asking chemists to take up the sale of this hook. We could probably have sold

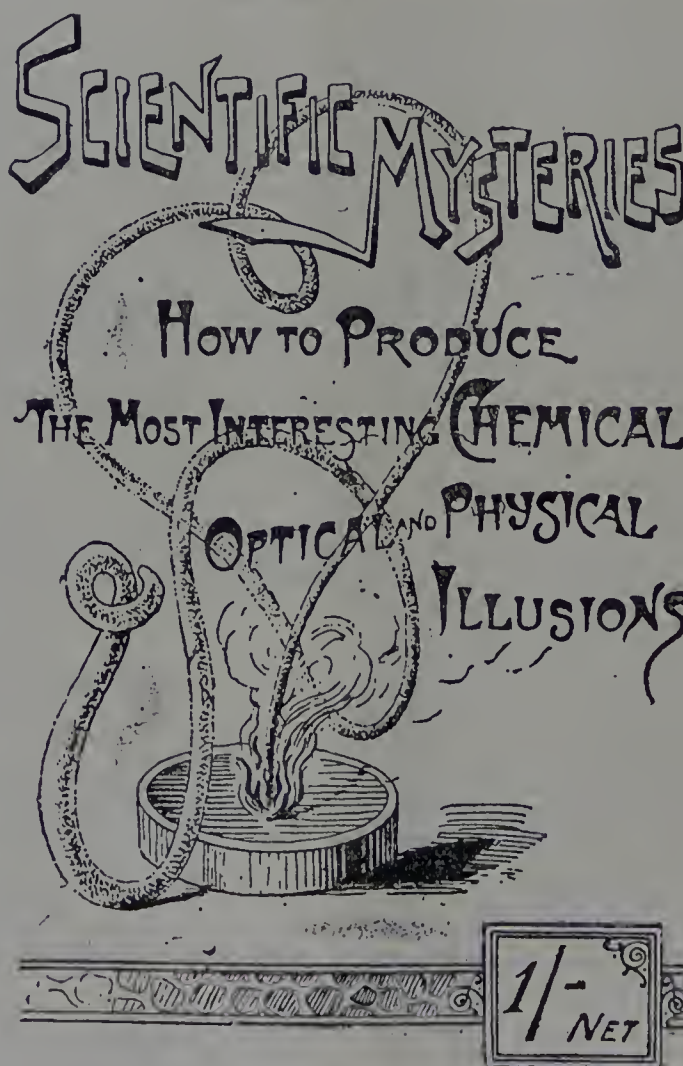
Twice as many

as we shall sell if we had put it through the bookselling trade; but chemists have always been good friends to us, and we seek to maintain our close association with them, and with them alone. The hook sells for 1s. net in this country. Vendors of it will greatly oblige us by selling at this price only. Abroad, with freight, duty, and risk, it will sell at a higher figure. Our price for it is 8s. 6d. per dozen, for not less than a dozen, and our dozens are 12 (not 13). If chemists huy from us they will have to pay carriage also; so we advise them to

order from one of the wholesale houses named on the opposite page, all of whom stock it and supply it at the same rate—viz., 8s. 6d. per dozen. A show-card is packed with each dozen hooks. "Scientific Mysteries" is

An Attraction to any Counter

or window. It ought to sell all through the winter; but it would pay the chemist to have 8s. 6d. worth, even if he had to give the books away. But he will not find that necessary. There will be plenty of customers glad to huy it all through the holiday season, and, indeed, at any time during the year. And in order to promote the sale we



have prepared for distribution to schools and other likely customers

Effective Handbills.

Any chemist who has stocked the book and will circulate these can have a supply of them bearing his name and address if he will send threepence in stamp to this office.

The wholesale firms who supply the book are:—

Ayrton & Saunders, Liverpool
Barclay & Sons, London
Bleasdale, Wm., & Co., York
Boileau & Boyd, Dublin
Clay, Dod & Co., Liverpool
Duncan, Flockhart & Co., Edinbro.
Edwards, Wm., & Son, London
Evans, Gadd & Co., Exeter
Evans, Lescher & Webb, London
Evans, Sons & Co., Liverpool
Glasgow Apothecaries Co., Glasgow
Goodall, Backhouse & Co., Leeds
Harris, Philip, & Co., Birmingham
Harrison, Parkinson & Co., Bradford
Hirst, Brooke & Hirst, Leeds
Ismay, John, & Sons, Newcastle
Lloyd, T. H., & Co., Leicester
Maw, S., Son & Thompson, London
May, Roberts & Co., London

Moss, J., & Co., London
Newbery, F., & Sons, London
Newsholme, G. T. W., Sheffield
Oldfield, Pattinson & Co., Manchestr.
Pinkerton, Gibson & Co., Edinbro.
Potter & Clarke, London
Raines, Clark & Co., Edinburgh
Raines & Co., York
Sanger, John, & Sons, London
Silverlock, H., London
Sonthall Bros. & Barclay, Brnmgm.
Sutton, W., & Co., London
Thompson, John, Liverpool
Thompson, Walters, Hole & Co. (Limited), London
Woolley, James, Sons & Co., Manchester.
Wright, Layman & Umney, London
Wyleys (Limited), Coventry

BOYS WHO LOVE EXPLOSIONS,

queer smells, and the other small excitements of experimental chemistry will be interested in "Scientific Mysteries," a shillingsworth emanating from the office of THE CHEMIST AND DRUGGIST. Its pictures and letterpress combine to show how chemical, physical, and optical illusions may be produced.—*Evening News and Post*.

ITS MERITS JUSTIFY A LARGE SALE.

For those of our readers who are of a scientific turn of mind we know of no better or more interesting work than "Scientific Mysteries," which has just been issued from the office of THE CHEMIST AND DRUGGIST (42 Cannon Street, E.C.), and published at 1s., and which will be circulated with the medium of the chemists and druggists. This is an octavo book of 100 pages, with 80 illustrations, and contains nearly 200 chemical, physical, and optical experiments and illusions. It is capitally put together, and is well bound. "Scientific Mysteries" has been issued at a very opportune moment, and, once it becomes known, the book is certain to be in great demand. Its merits justify a large sale.—*Hackney Express*.

AN EYE TO CHRISTMAS PARTIES.

A very useful volume, "Scientific Mysteries," issued from the offices of THE CHEMIST AND DRUGGIST, shows how a large number of simple and effective experiments can be made in illustration of chemical, physical, and optical wonders. The collection embraces all kinds of chemical and other experiments, from the strictly scientific to the parlour, and gives details for the manipulation of much that can be made at once instructive and yet amusing. At this time of the season the instructions could be followed with an eye to the entertainment of Christmas parties.—*Weekly Scotsman*.

MR. SEPTIMUS VAUGHAN MORGAN, one of the proprietors of this journal, is on a tour round the world. He is now in India, and may be addressed by firms or subscribers, until further notice, Poste Restante, Bombay. For full itinerary, see this Journal, October 3, 1891.

SALIPYRIN MIXTURE FOR INFLUENZA.—This, as mentioned last week, is much used in Berlin. The formula for it is:—

Salipyrin	..	..	..	..	90 grains
Glycerine	..	..	..	..	3lj.
Syrup of raspberry	..	..	..	..	3j.
Water, to	..	..	..	..	3ij.

This is to be taken in tablespoonful doses at intervals of a quarter to half an hour.



AND

Literary Notes.

A Handbook of British Commerce. By P. L. Simmonds, F.L.S. London: Moffatt & Paige. Price 3s. 6d.

MR. SIMMONDS'S book, as the author proclaims in the subtitle, is put forth as "a descriptive and statistical account of the various articles forming the import and export trade of the United Kingdom." To do full justice to so great a subject would have required a vastly greater volume than that now before us, but, as a matter of fact, the book does not pretend to give more than an exceedingly succinct account of the most important of the various species of goods which enter into our national commerce. The author's botanical predilections are probably the reason that he has treated the products of the vegetable kingdom with much more minuteness than he has bestowed upon articles of non-vegetable origin. The work contains a good deal of out-of-the-way information, much of which has been selected with great care and intelligence. It will be found useful as a handy book of reference for such as are not in a position to lay hands conveniently upon the larger and costlier works of specialists in the various branches of knowledge. It cannot be reasonably expected that one man, however widely-read and assiduous, should possess so intimate an acquaintance with all branches of commerce as to ensure him immunity from an occasional error; but, upon the whole, the author must be credited with a commendable sense of discrimination. The possession of this sense has enabled him, while crossing the slippery plank that spans the treacherous pool of compilations, to save himself when in danger by gripping at the strongest and most reliable authorities as the reeds by which to steady his course.

Recent Materia Medica: Notes on their Origin and Therapeutics. By F. Harwood Lescher. Fourth edition. London, 1891: J. & A. Churchill. 8vo. Pp. 115. 2s. 6d.

ONLY three years have elapsed since the last edition of this work was published, and the author has found it necessary to add about a hundred new remedies, including such as have been rendered official, and which may not have been incorporated previously. In several respects the work is peculiar of its kind, but perhaps its most notable character is the pithy nature of all the notes. The author—a wholesale druggist of sound scientific training and tastes—appears not to have had time to become verbose, and has aimed to put together the principal facts—chemical, pharmaceutical, and therapeutical—regarding new remedies as concisely and clearly as it can be done. The result is decidedly advantageous to the physician and pharmacist consulting the volume, and any lack of detail which may be felt in the therapeutic department is amply compensated in the references to medical literature. The book deals with vegetable drugs and the active principles thereof, as well as with synthetic compounds, so that it is more comprehensive than any other English work in the same department. We notice that Mr. Lescher still retains drumine (page 46), which was shown to be simply calcium sulphate, and not an alkaloid. He questions its existence, but it would be better to omit it altogether. We have noticed a few typographical slips, but, on the whole, the book has been carefully produced, and should prove its usefulness to those who place it in their libraries. The value of the book would be greatly enhanced by the addition of a good index. Although the articles are arranged alphabetically, there are many cross-references which are to some extent hidden, owing to the want of page-references.

AMMONIUM SALICYLATE is a better expectorant than senega and quillaia, says Professor Goll.

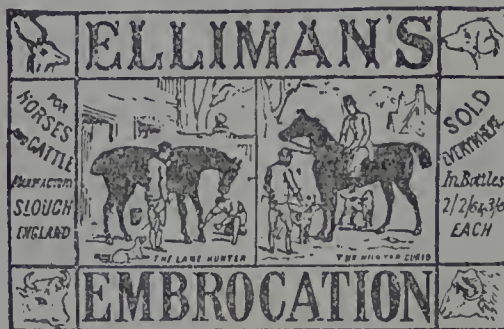
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The SANITAS COMPANY, LIMITED, beg to inform the Trade that they have just made a further contract for elegant Glass Tablets to be affixed to the windows of Chemists' shops, and they will be greatly obliged if Chemists who desire to have the said Tablets will kindly notify their wishes.

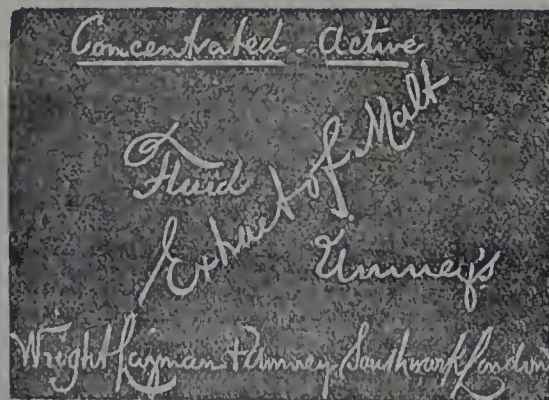
New Pamphlets, Handbills, Show Cards, Diaries for 1892 and Calendars for 1892, may now be had direct, or preferably through Wholesale Houses for encl sure, on application.

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CASCARA

See this JOURNAL, 19th September, 1891.

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**THE PHARMACEUTICAL SOCIETY'S
 NEW BY-LAWS.**

We have to congratulate the Pharmaceutical Society of Great Britain on the happy issue of their appeal to the Privy Council to consent to the new by-laws which the Council of the Society submitted to the members after the annual meeting in May last. A long series of legislative failures has of late discounted the interest which chemists and druggists have taken in the schemes hatched by Mr. Carteighe and his colleagues; and we should doubt whether a majority of the members of the Society had not forgotten all about the reforms planned by means of these by-laws. We are confident that not many could have accurately distinguished between the purposes aimed at by means of corrected by-laws and those which it was sought to accomplish by the Pharmacy Bills of the last ten years.

One purpose, if not the principal purpose, of this revision of the by-laws is, to strengthen the financial position of the Pharmaceutical Society. This at any rate will be the result of the new regulations which the Privy Council has just sanctioned. The fact that the Society was outrunning the constable has ceased for some time to be a matter of controversy. The two ends failed to meet last year, and there was not much prospect of any return of those fat years when large sums were invested in Consols at frequently-recurring intervals. Lavish expenditure on buildings had worn down the accumulated funds most seriously, and had thus not only necessarily reduced the income, but had at the same time involved a large development of the outgoings. If the hoary maxims of our copybooks could have been depended upon, the Pharmaceutical Society was preparing for itself an old age of decrepitude and poverty. But like the lucky young prodigal in real life, whose careful old uncle so often dies at just the right moment, the Pharmaceutical Society has struck a vein of gold which will balance a good deal of its recent extravagance. The Privy Council sanctions the proposal that the deficiency in its income which was alarming its friends shall be made good by charging seven guineas instead of five for the trade qualification, and by extracting three instead of two guineas for every renewed attempt of defeated candidates to pass.

This renders a considerable augmentation of the Society's income certain. We have previously shown that the old fees were sufficient to pay all necessary expenses and yield a very fair margin of profit. But if the Privy Council, as representing the public, has no objection to a higher rate, we do not see that qualified chemists and druggists need have any. If the higher fees check the advance of competitors in pharmacy, so much the better for those who are at present certificated; if they do not have this effect, the Pharmaceutical Society—which is, as it claims to be, the only existing trade organisation—will have another thousand or two a year, some of which may some day be spent for the benefit of all. The trade can have no interest in seeing the Pharmaceutical Society compelled “the face of wealth in poverty to wear.” Under the present administration it has little to hope for from the Council's ideas, whatever may be its fortune; but a time may come when some united effort can be agreed upon, and in such an eventuality spare cash will be useful.

And let us lay it down here and now, that those who furnish these funds—that is to say, the qualified men of the future—will have a moral right to share the benefit of the Council's expenditure, whether they associate themselves intimately with the Society or not. They are to contribute to its wealth, and the familiar old taunt to outsiders, that they have done nothing for the commonwealth, will year by year lose what little force it ever had.

The advance of fees is the most prominent feature of the revision, but the most valuable alteration in the by-laws is that which adds “knowledge of the law relating to the sale of poisons” to the Minor and Modified examinations. This addition was adopted on the suggestion of the Privy Council's visitor, and had frequently been advocated in this journal. We may, perhaps, be allowed to interpolate here the remark that, so far as we know, the best means of acquiring an exact knowledge of the law relating to the sale of poisons is a study of the treatise published in our DIARY for 1891. That treatise, with many interesting additions, will be published by us in book form in a few weeks.

The other modifications of the by-laws are numerous, and some of them are of interest; but they concern the regulation of the Society's affairs only, and only come under the purview of the Privy Council as being part of the by-laws

generally. The Major examination, for instance, which as a purely voluntary examination does not concern the public, is to be altered. The subjects are to be limited to botany, materia medica, chemistry, and physics, and *may be* limited to any two of these. The certificate will imply a more extended acquaintance with the subjects chosen, the general competence of the candidate having been proved by his Minor or qualifying examination. The additional fee for the Major will be reduced from five to three guineas, and the lower charge may be found to pay better than the higher. At any rate there is very little danger of losing on it.

Life-membership of the Society is to be reduced from 20 to 10 guineas; members who have abandoned the Society and who may desire to return to the fold are to be fined 1s., instead of 10s. 6d.; and chemists and druggists in business before 1868 are to be admitted as members if they like to pay the annual subscription, the two-guinea entrance-fee being abolished. These changes are adopted evidently with a view of tempting additions to a steadily decreasing roll. They can hardly have any appreciable effect. The last proposal, which might at one time have been of some use, comes twenty years too late.

The other changes in the by-laws are not of much importance. Many of them are merely verbal alterations. A class of corresponding members, a little lower than the honorary members, is to be created; women's rights are recognised by the provision that “words imputing the masculine shall include the feminine”; the cumbersome and misleading designation of “apprentices or students of the Society” is to be simplified to “students of the Society”; and the Council is to have power to appoint certain committees, not necessarily “from among themselves,” and to appoint special examiners to assist the regular board.

Apart from the controversial question of the fairness of the higher scale of fees for a qualifying certificate it will be generally admitted, we think, that the new regulations, all of which are now in force, are reasonable and wise concessions or adaptations to modern circumstances.

THE PROPOSED PERFUME DRAWBACK.

OUR article last week giving particulars of the proposed extension of the drawback scheme on medicinal tinctures to the perfumery trade has excited two opposite currents of expression. We print elsewhere a letter from the chairman of the chemical section of the London Chamber of Commerce, in which that gentleman defends the secrecy with which his committee have vainly endeavoured to surround their recent proceedings, and traverses our suggestion that the privileged wholesale perfumers upon the committee may succeed in drawing their chemical colleagues in a direction contrary to the interests of the entire trade. As Mr. Wightman omits to back his opinions with facts, it is impossible to discuss the question with him, and we can only express the hope that his tried business experience and undoubted honesty of purpose may enable him to defeat any attempts to use the influence of the section in support of unfair privilege.

We have also been favoured with the opinions of some leading perfumery houses upon the drawback proposals. One firm who are among the privileged “bonded” manufacturers flatly contradict the accuracy of our statements of last week; while another house, also of eminent reputation,

but which does not occupy a similarly favoured position, as pertinently thanks us for placing the facts so clearly before the trade in their true light. The gentleman who disagrees with us has seen with amazement that we have allowed ourselves to be strangely misled. According to him, "there is no pretence whatever for stating that a few large manufacturers have the monopoly of exporting in bond under Customs control." Our correspondent continues: "I know of no case in which a permit for such work has been refused, but I do know of several cases (and within recent years, too) in which such permits have been granted." Our other correspondent explains fully how a very well-known firm found it impossible (not through official objections, but in consequence of the jealousy of rivals already in possession) to get a place among the manufacturers in bond.

It is notorious that the export perfumery trade is at present, and has been for years, in the hands of a few firms—we believe there are nine—who carry on their manufacture in bond. The perfumery bonded warehouses are at the St. Katherine Docks, and at the Red Lion Wharf, both private concerns, and the latter is the only one where female hands may be employed. There is, besides, one firm who carry on the manufacture in their own freehold warehouse, situated by the river, and who refund to the Customs all the expenses occasioned to that department by the employment of a special staff of officers for service in their warehouse. With that exception, perfumery manufacture in bond is confined to the two places we have named. And, while it may be left an open question whether in recent years the Customs have or have not been in the habit of persistently placing difficulties in the way of applicants for permits to manufacture in bond, we reiterate that, even if no *bonâ-fide* applications were refused by the Customs, the trade is, in practice, enclosed with a fence insurmountable to the non-privileged. What is the use, for instance, of a Customs permit if it is found that of the two warehouses in which you could put it into operation one is always "full up," while in the other competitors already in possession have secured themselves against further intrusion by an understanding with the landlord company?

Our critic further asserts that there is no thought of "compensation for disturbance," nor the slightest desire for a preferential system of "checks and balances" in the minds of the manufacturers now enjoying bonded warehouse facilities. We are glad to hear it, and we compliment those gentlemen upon their conspicuous disinterestedness. Nevertheless, we are afraid we discern the trail of a little snake of egotism across this bright path of unselfishness. For what is the suggestion? Simply that the proposed new scheme should apply to all new-comers who choose to take advantage of it, but that the present regulations should continue in force for the special convenience of the few makers who now manufacture in bond, and who have gone to the expense of organising factories at the bonded warehouses. The two systems, the advocates of the old style suggest, might work harmoniously side by side—the few old firms under the Customs, the many new ones under the Excise. Apart from the fact that such an amphibious proposal is not likely to recommend itself to the Revenue authorities, we should like to know why the present beneficiaries should be so anxious to remain a separate coterie if they do not enjoy special advantages?

Under the present *régime* the export perfumery trade has long been a dwindling, or, at best, a stagnant, industry, and the number of firms engaged in it has not increased. This we state on the best authority, and it is an important factor in the discussion.

CAPE COLONY PHARMACY ACT.

THE Act regulating medicine and pharmacy in Cape Colony, to which we have several times referred, and the principal proposals of which concerning pharmacy we published on August 8 last, was passed by the Cape Colony Legislature last summer, and received the Governor's assent on August 18. It provides for the registration and control of medical practitioners, apothecaries, dentists, chemists and druggists, midwives, and nurses practising within the colony, and is described as the "Medical and Pharmacy Act, 1891." Before this Act came into operation licences were granted to chemists and druggists by the Medical Board at Cape Town, either on production of the British certificate, or on the candidate answering within three hours, in the presence of a magistrate, a paper of questions set by the Board and sent by post. The questions were not of wide range, but required a moderate knowledge of chemistry and a familiar acquaintance with the Pharmacopœia.

The new Act covers a great deal, and in point of thoroughness can give points to any other pharmacy statute in force throughout the British dominions, though it must be added that in some of its sections it is not all that could be wished in respect of definiteness.

A "Colonial Medical Council" and a "Colonial Pharmacy Board" are first constituted; the former is to be concerned with so much of the Act as deals with medical practitioners and dentists, and it consists of seven medical practitioners and one dentist. Three medical practitioners and the dentist are to be nominated by the Governor, and the others are to be elected by the medical practitioners of the colony. The Pharmacy Board, which has to control apothecaries and chemists and druggists, is to consist of one delegate from the Medical Council, two chemists and druggists nominated by the Governor, and three to be elected by the chemists and druggists of the colony.

The Colonial Secretary is to keep separate registers of the several classes named, but there is no provision for publication of these. All chemists and druggists licensed when the Act was passed are entitled to appear on the register, and for the future "any person who has attained the age of twenty-one years, and has been duly indentured and [has] served as an apprentice for a period of not less than four years to any regularly licensed apothecary or chemist and druggist in this colony or elsewhere, or who can produce satisfactory proof that he has been practically engaged in the compounding and dispensing of medicines or medical prescriptions under a duly licensed chemist and druggist for a period of not less than four years then last past, may obtain a licence to practise as a chemist and druggist, on passing an examination to the satisfaction of the Board in any subjects fixed by the Board with the approval of the Governor." The examination and registration fee is not to exceed 5*l*. The certificate of the Pharmaceutical Society of Great Britain, or from any college society or board recognised by the Board, will entitle the holder to a licence to practise without further examination if otherwise complying with the provisions of the Act.

To wilfully and falsely pretend to be, or to take or use the name or title of a chemist and druggist, renders an offender liable to a penalty not exceeding 100*l*., or, in default of payment, to imprisonment with or without hard labour for a period not exceeding six months. The same tremendous penalty is incurred by any unlicensed person who shall "practise as a chemist and druggist," and to prevent the abuse of the name-lending system it is expressly provided that it shall not be a defence for the accused to prove that he is in the employ of or agent for a duly licensed chemist

and druggist, unless he is under the actual personal supervision and control of such duly licensed person.

Chemists and druggists will have to pay an annual licence-fee, and medical practitioners who will pay the same are to be entitled to compound and dispense medicines prescribed by themselves; but it would seem that they are not entitled to practise generally as chemists and druggists.

Another stiff penalty for an offence too vaguely defined is inserted in section 44, which deals with the storage of poisons. Any medical practitioner, or chemist and druggist, who shall suffer poisons to be kept "without due care," or shall sell or keep for sale by himself, or any apprentice, servant, or agent "any medicines or drugs of bad quality," is liable to a penalty of 20*l.*, or, in default of payment, to imprisonment for a period not to exceed three months, and may have his licence cancelled if the Governor shall think fit to do so.

The poisons schedule is in two divisions, and corresponds exactly with the two parts of the poisons schedule in the British Act, except that carbolic acid appears in division 2 of the Cape Act. Additions to the schedule may be made by either the Council or the Board, but must be approved by the Governor. Medical practitioners and chemists and druggists are to label all the packages containing poison in their possession with the word "poison," and they must exercise due care and caution in the custody of the same. Cape druggists have evidently taken warning from the judgment of Mr. Justice Hawkins in this country, and have got a section inserted saying that "poisons within the meaning of this Act shall not be sold by any person other than a duly licensed apothecary or chemist and druggist, or the indentured apprentice or bona fide paid assistant of such apothecary or chemist and druggist." Importers and general dealers may get certificates, under certain circumstances, entitling them to deal in poisons, with some restrictions. These vendors are also subject to penalties if they fail to exercise due care and caution. The conditions under which poisons must be sold are similar to those prescribed by the Pharmacy Act of Great Britain, but they are more voluminously expressed in the Cape Act. In view of a difficulty which has occurred in this country, it is provided that the poisons book shall be submitted forthwith upon demand for the inspection of the secretary of the Board or of any person authorised by him in writing under his hand. For refusal a fine not exceeding 20*l.* may be imposed. False statements by purchasers of poisons are to be similarly punished. The poisons provisions are not to apply to—

(a) Any poison in homœopathic medicine, unless in crude state, mother-tincture, or of greater strength than third decimal potency.

(b) Patent or Dutch medicines.

(c) Photographic materials for the purpose of photography.

(d) Medicines dispensed by veterinary surgeons or farriers for animals under their treatment.

(e) Fly-poison papers, when duly marked as such.

(f) Any poison supplied by the chairman or secretary of any poisoning club to any member of a poisoning club for the purpose of destroying wild animals or vermin.

Conditions as to labelling and registering, however, apply.

The Act limits the right of holding public appointments to licensed persons, and no one can recover for medicine prescribed or supplied unless he is registered under the Act.

COMMENTARY.

THE DENTISTS' REGISTER.—An attempt was made at the General Medical Council meeting to get the Council to declare that "the employment of unqualified assistants is disgraceful or infamous conduct under the Dentists' Act (Section 13)," but the Council were shy about the matter and referred it to the executive committee. Chemists who are on the dentists' register should see that their interests are protected.

ETHICAL ANALYSTS.—The Institute of Chemists proposes to meet in the Chemical Society's room, Burlington House, next Tuesday evening, at 8 o'clock, to discuss "The Ethics of Professional Certificates." The discussion will be introduced by Professor Tilden, F.R.S., President, Dr. Frankland, F.R.S. (whether father or son the notice does not say), Mr. M. Carteighe, and Mr. C. E. Cassal. This is the second of two meetings which the Institute proposes to hold annually. There is to be an informal dinner (4*s.*, exclusive of wine), at 6 P.M., at Previtali's, Arundel Street, before the meeting.

THE PHARMACY AND POISON LAWS OF THE UNITED KINGDOM.—In view of the circumstance that in future candidates for the Minor examination will be required to manifest an acquaintance with the laws relating to the sale of poisons, we shall publish early in 1892 a volume entitled as above. It will be based on the treatise published in the DIARY, 1891, which will, however, be considerably expanded. The book will, indeed, be a complete handbook of the history and interpretation of the whole of the pharmacy laws of this country, of Ireland, and of the principal colonies. Fuller details will be published shortly.

IMPURE CHLOROFORM.—Dr. E. H. Brien has communicated to the *British Medical Journal* the results of an analysis of a sample of chloroform which was used in producing anaesthesia, the patient dying under the anaesthetic. "The drug was contained in one of the manufacturer's bottles, which remained unopened for one week while in Dr. Brien's possession, he having obtained it from a local druggist, who had it from a wholesale house in Liverpool. It had a specific gravity of 1.495 at 60° F. as compared with 1.5 absolute chloroform and 1.497 P.B. chloroform. At 144° F. and 770 mm. pressure the bulk distilled over, 'but towards the end the temperature rose 5° (149° F.), leaving an oily liquid behind and a strong smell of chlorine in the flask.' With nitrate of silver a white coloration appeared, which went on heating. A slight brown coloration followed treatment with sulphuric acid." The analyst made a control estimation of a sample of the same firm's chloroform "obtained from pure alcohol," and found it "in every respect pure." He concludes by drawing attention to the two possible explanations of the condition of Dr. Brien's sample of the drug—namely, that by some unexplainable chance it may have originally been impure; or, secondly, that it had, since leaving the manufacturers' hands, undergone a change which had liberated chlorine. It is so seldom that a matter of this kind is sifted to the bottom that these facts deserve to be noted.

DISPENSERS IN THE NAVY.—Although legally-qualified pharmacists are appointed to do the dispensing in the naval hospitals at home and abroad, in the navy proper dispensing has always been a duty of the medical officers, who, however, deputed it to marines. A change has now been introduced by the Medical Director-General of the navy. Having discovered that the dispensing staff attached to the various marine divisions is not qualified to perform the very important duties appertaining to the office, and that

many of the men have passed no examination, the Director-General has arranged that all dispensers shall undergo a course of instruction in one of the Royal Naval hospitals for a period of not less than six months. At the end of this time they may be examined, and if found to possess the requisite knowledge, be granted certificates which will entitle them to hold the position they have hitherto had. This reform, it will be seen, brings the navy exactly on a footing with the Army Medical Staff Corps, but the *Western Morning News* appears to have been under the impression that the marines when qualified would be legally entitled to dispense medicines throughout the land. In fact, our contemporary was slightly confused altogether. There has in consequence been some correspondence in the *News*, several objecting to such a short period of training as six months; but in making the conditions the same as in the army, the Director-General has, we think, made a very good reform, which will lead to what is practically the case in the army—viz., that most compounders hold the Minor certificate.

SELECTED POISONING CASES.

POISONED BY HORSE-MEDICINE.

An inquest was held at Stockport, on December 9, on Henry Smith, carrier, who died from drinking a horse-mixture known as gripe-mixture. Smith suffered from heart-disease, and was in the habit of taking this mixture to alleviate pain, but he took an overdose and died. A verdict of "Death from misadventure" was returned.

VERY SAD.

The Rev. Dr. W. C. Lindsay, pastor of the first Baptist Church in Columbia, South Carolina had a little girl named Maud, five years old. The child had a slight fever, so the father went to W. C. Fischer's drug-store to buy some quinine for her. The clerk, W. L. Bratton, put up three doses, three grains each, of what he supposed was the drug called for. At the child's bedtime Mrs. Lindsay gave her one of the powders. The parents then left the little girl and went to church. When they returned, two hours later, they found the child dead. An examination of the remaining powders showed that they were morphine, instead of quinine.

HIS LAST DRINK.

James Ward, aged 29, of Leander Street, Liverpool, a cotton-porter, last Thursday (December 10), went to a chemist's shop in Brownlow Hill, and asked for two penny-worth of carbohc acid. An assistant supplied him, and he was then asked what he wanted it for. He hesitated about giving a reply, and was told he could not leave the shop until he had either explained what he wanted to do with the poison or returned it. He instantly drew the cork and before he could be prevented swallowed the liquid. He died in the infirmary later in the day. At the coroner's inquest it transpired that he had not been properly sober for four years.

'T WAS NOT THE DOG THAT DIED.

An inquest was held at Oakham, on December 11, regarding the death of William McDonald, a groom at the Cottesmore kennels. He went to his bedroom about 4 P.M. on the previous day, where another groom was lying with a broken leg. McDonald was seen to lift something to his mouth and swallow it. An hour later another man came to the room, and remarking, "Mac looks very white," touched him, and found he was dead. A bottle was found under McDonald's bedclothes labelled "Prussic acid—poison." It was afterwards ascertained that deceased had obtained the poison that morning from an Oakham chemist, stating that it was to kill a dog.

HYDRARG. BICHLOR. FOR CHLORAL HYDRATE.

We mentioned a fortnight since that a man named Price was suing Charles R. Avery, a Brooklyn druggist, whose

dispenser, it was said, had compounded hyd. bichlor. in a prescription in mistake for chloral hydrate as ordered, whereby the plaintiff said he had been injured for life. He claimed \$10,000 damages. The druggist denied the mistake, but the bottle, containing what purported to be the residue of the physic dispensed at his store, and which had been in the plaintiff's possession since his illness, was produced and proven to contain bichloride of mercury. The doctor said from the first that there was corrosive sublimate in the mixture. The jury decided for the patient: damages \$4,000.

TOILET POISONS.

A little girl of three, the daughter of a publican named Hooper, living in Chester Road, Hulme, drank carbohc acid from a bottle lying on a dressing-table, and died in consequence. The jury asked the coroner to censure the father and mother of the child for their great carelessness in leaving such a dangerous poison within the reach of the children.

OF NO FURTHER USE.

The housekeeper and her husband, caretakers at 88 Chancery Lane, where Mr. Cocks has a chemist's shop, were found on Tuesday morning, both dead. They had apparently taken prussic acid. The only reason assigned for the double act of self-destruction is that Mr. and Mrs. Lewsey were in such a state of health as would not permit of their carrying on the duties which they had hitherto discharged.

Gazette.

PARTNERSHIPS DISSOLVED.

Johnson, J. C., & Rees, D. H. W., under the style of J. C. Johnson & Co., Liverpool, spice-millers.

Osborne & Watson, Bournemouth, hydropathic establishment.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDERS.

Best, Robert, Middlesborough, botanic-beer manufacturer.

Cohen, Louis David (late trading at Aldersgate Street, in co-partnership with T. F. Lynch, as Lynch & Co.), late of Aldersgate Street, City, and Pembroke Gardens and Pembroke Square, Bayswater (present residence unknown), druggists' sundriesman.

Faulkner, Frank, late of Langley, Staffordshire, now trading at Birmingham and Smethwick, formerly having an office at Furnival's Inn, London, and now having an office at Queen Square, London, W.C., carrying on the business or profession of a teacher of the sciences of malting, brewing, and distilling, and a consulting brewers' chemist.

Glover, George, Putney, spice-manufacturer.

Stockman, Tom S., Walbrook, City, chemical agent.

ADJUDICATIONS.

Best, Robert, Middlesborough, botanic-beer manufacturer.

Cohen, Louis David (late trading at Aldersgate Street, in co-partnership with T. F. Lynch, as Lynch & Co.), late of Aldersgate Street, City, and Pembroke Gardens and Pembroke Square, Bayswater (present residence unknown), druggists' sundriesman.

Glover, George, Putney, spice manufacturer.

Gray, William (trading as Gray & Co.), Wath-on-Dearne, soap-boiler and manufacturer.

Lovl, Julius, Hanley, sponge-merchant.

Millns, Arthur Albert, Fenchurch Street, City, Stratford, and South Woodford, paint, colour, and varnish manufacturer.

O'Callaghan, George Henry Kenneth, Ludlow, surgeon.

ORDERS MADE ON APPLICATIONS FOR DISCHARGE.

Burge, George Henry, Bristol (late pickle and vinegar manufacturer), manager of vinegar-works—discharge refused.

Macphail, A. Lamont, Stoke Newington Road, N., doctor of medicine—discharge suspended for two years.

Scientific Notes :

On Chemistry, Pharmacy, Botany, Materia Medica, &c.
Original, Selected, and Translated.

EFFECT OF CHEMICALS ON ALUMINIUM.

Pharmaceutische Centralhalle, No. 24, 1891, publishes an interesting paper, by Drs. A. Lübbert and Roscher, on the action of various substances on aluminium. Briefly stated, the results were as follows with watery solutions of the solvents. The common alcohols, including glycerine, do not affect the metal, nor do ethers, aldehyde, and acetone. A large number of organic acids were tried, and all, with the exception of 1-per-cent. solutions of propionic and lactic acids, affected the metal. The alkylamines, in 1 to 10 per cent. solutions, red and white wines, tea and coffee, all acted upon the aluminium; and of the antiseptics, iodoform in ethereal solution was the only one which did not attack the metal. Even a 0.25-per-cent. solution of salicylic acid gave a reaction, and so did 1-per-cent. carbolic acid and 4-per-cent. boric acid solutions. Of course, in all these cases the metal was put to a very severe test. Sometimes the solutions were boiled in the aluminium vessel, and the duration of exposure was, in nearly all cases, four days.

ACETANILIDE AND SALICYLIC ACID.

DR. RITSERT observed some time ago that the mixture of the above compound with ammonium bromide, known as "antinervin," is remarkable for the fact that the melting-point of the mixture is much below that of its constituents. Mr. H. Prüsse, one of his pupils, has since taken the matter up, and sends a report to the *Pharmaceutische Zeitung*. Acetanilide melts at 114° C., and salicylic acid at 156° C., but antinervin melts at about 80° C. The following are the results obtained from the examination of various mixtures, the lower figures denoting when melting began, and the higher when it was complete:—

One equivalent of salicylic acid with			
1 equivalent of acetanilide	..	..	82° C.—119° C.
$\frac{1}{2}$ "	"	"	93° C.—141° C.
$\frac{1}{4}$ "	"	"	127° C.—148° C.
$\frac{1}{10}$ "	"	"	139° C.—150° C.
$\frac{1}{100}$ "	"	"	144° C.—154° C.

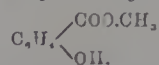
One equivalent of acetanilide with			
1 equivalent of salicylic acid	..	..	82° C.—119° C.
$\frac{1}{2}$ "	"	"	76° C.—86° C.
$\frac{1}{4}$ "	"	"	88° C.—100° C.
$\frac{1}{10}$ "	"	"	91° C.—104° C.
$\frac{1}{100}$ "	"	"	107° C.—111° C.

It is evident from these figures that as small a proportion as $\frac{1}{100}$ th equivalent of either body mixed with the other is capable of materially altering the melting-point, and, obviously, antinervin is as near as possible represented by a mixture of 1 equivalent of acetanilide and a half of salicylic acid.

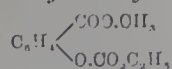
NEW MEDICINAL PHENOL DERIVATIVES.

THE successors of F. von Heyden have recently patented in Germany, a new series of phenol derivatives which are stated to be odourless, tasteless, neutral, and non-irritating bodies obtained from essential oils. The hydroxyl-containing compounds in these oils are said to be changed into the corresponding carbonates, or carbonates in association with an alcoholic radical. For instance, in the case of oil of wintergreen (methyl salicylate), we have such a change as the following effected:—

Methyl Salicylate.



Ethyl Carbonate of Methyl Salicylate.



Guaiacol, eugenol, and phenols generally are capable of transformation in this way, and it is noteworthy that, with the exception of ethyl-carbonate of eugenol (which melts at 26–27° C.), all the bodies are liquids, boiling at from 255° to 303° C. The mode in which the bodies are made is exam-

plified with eugenol methyl-carbonate. An equivalent of eugenol (49.2 Kg) is mixed with 150 litres of alcohol, then shaken with a watery solution of an equivalent of methyl-chloro-carbonate. After a time an oily portion floats on the top of the watery solution; it is separated, washed several times with dilute alkali, then with water, dried and rectified. Obviously the reaction which takes place is that the Cl atom of the methyl-chloro-carbonate and the H atom of the hydroxyl group in the eugenol unite, the remaining elements forming the new body. The derivatives have still to be studied therapeutically and popular names given to them.

LINAMARIN.

A. JORISSEN and E. HALES report that they have isolated from linseed a body resembling amygdalin and laurocerasin, which, when decomposed, yields a sugar and hydrocyanic acid. They call the body linamarin. It is of the nature of a glucoside, and occurs in tufts of colourless, needle-shaped crystals, with a very bitter taste. It differs from amygdalin in several respects. For instance, it is only sparingly soluble in cold water, melts at 134° C., and can be heated to 150° C. without decomposing; it dissolves in concentrated sulphuric acid without colour (amygdalin gives a violet colour), and no benzaldehyde is formed in its decomposition.

PREPARATION OF HYDROBROMIC ACID.

M. FILETI and F. CROSA (*Gazzetta and Jour. Chem. Soc*) have found the following process convenient and economical for the preparation of considerable quantities of hydrobromic acid:—A mixture of 1 part of red phosphorus, 2 parts of water, and sufficient sand to form a paste, is introduced into a flask, 10 parts of bromine are then gradually added by means of a funnel provided with a stopcock, the flask gradually warmed, and the mixture of hydrogen bromide and bromine vapour passed through a deep glass jar filled with a mixture of red phosphorus and asbestos impregnated with concentrated hydrobromic acid. Every trace of bromine vapour is thus effectually retained, and the process is continuous, and requires no supervision beyond an occasional shaking of the flask.

BACTERIOLOGICAL EXAMINATION OF WATER.

THE chief interest attaching to the bacteriological examination of water, writes Professor P. F. Frankland in *Nature*, lies in its application to the hygiene of water-supply, inasmuch as it is all but certain that two at least of the most fatal zymotic diseases—cholera and typhoid—can be, and are, constantly propagated through the presence of specific micro-organisms in water, and indeed the majority of bacteriologists are agreed as to the particular forms responsible for these diseases. On this account it is conceived by many that the primary object of the bacteriological examination should be the search for such pathogenic microbes. It is obvious that if the typhoid organism could be detected with unerring certainty in any water in which it was present, a search for this bacillus in the ordinary course of water examination would still have only a very subsidiary interest. Waters are surely not only to be condemned for drinking-purposes when they contain the germs of zymotic disease at the time of analysis, but in all cases when they are subject to contaminations which may at any time contain such germs. Sewage-contaminated waters must on this account be invariably proscribed, quite irrespectively of whether the sewage is, at the time that the water is submitted to examination, derived from healthy or from diseased persons. In the present state of our knowledge there can be no doubt that chemical analysis affords us in general a better, although a far from perfect, indication of sewage contamination than do the results of bacteriological examination. The real value of these bacteriological investigations, if judiciously applied, consists in their power of furnishing us with information as to the probable fate of dangerous organisms, should they gain access to drinking-water. It is by their means that we have learnt that many such organisms can preserve their vitality—nay, in some cases can actually undergo multiplication—in ordinary drinking-water; that they are destroyed by maintaining the water at the boiling-point for a short time; and that they are more or less perfectly removed by some processes of filtration and precipitation, whilst other processes of the same nature are worthless, or even worse.

Medical Cleanings.

PREMATURE BALDNESS.

WRITING to the *Lancet* regarding the various causes which produce baldness, Dr. W. Joseph Tyson, of Folkestone, states that it is much more common in men than in women, and he considers the causes to be insufficient exposure of the hair, influence of heredity, excessive mental work and great anxiety, venereal and alcoholic excesses, constant washing, and want of pomade. It is exceedingly difficult to estimate each cause at its true value. The treatment he recommends is that a head covering should be used as little as possible and never be worn indoors, in trains, or in closed carriages. In summer and still weather straw hats are best; in winter, light felt, ventilated and unlined. Too constant washing of the hair is unnecessary, as well as harmful. Once a week is quite often enough for cleanliness, as well as for maintaining the strength of the hair. The same remark applies to constant brushing, for continual brushing, especially with hard brushes, should be avoided. There is a common notion that greasing the hair is vulgar; so many persons fall into the other extreme, and never apply any pomade at all. After the hair has been washed it is certainly beneficial to apply some form of simple grease or oil. When the head-hair is becoming rapidly thinned, some stimulating material, such as ammonia and cantharides, added to the oil will increase its good effects. The term "idiopathic" is given to the above form of baldness, because it is supposed not to depend apparently upon any exciting cause. These notes show that many of the popular preparations for the hair, which are supposed by some to have little effect, may be of the greatest value.

PHTHISIS NIGHT-SWEATS.

It has been remarked by a continental physician that consumptive patients who were treated with hydrastis canadensis for blood-spitting had the night-sweats entirely arrested. It would be useful, therefore, to have an extensive trial made of the remedy. The dose is 30 drops of fluid extract at bedtime.

NEW TREATMENT FOR ALOPECIA OR BALDNESS.

THE form of alopecia for which Mr. Moty suggests a new plan of treatment is that which at times proves so obstinate, in spite of all applications, commonly known as alopecia areata. At a recent meeting of the French Society of Dermatologie et Syphilographie, he presented a number of patients who had been subjected to hypodermic injections of corrosive sublimate in strength of 2 to 500, and claimed that the treatment had proved very satisfactory, in that the growth of hair over the bald spots had been more rapid than after other modes of treatment. A variety of vehicles had been experimented with, until it was found that an aqueous solution was the best. Several injections of not more than 5 or 6 drops are made round each patch.

USES OF ANEMONINE.

DUPUY reported to the Congress of the Société Savantes that anemonine, the active principle of wood anemone, is a medicine of great value in the treatment of chronic bronchitis and coughs. There are also indications that it is of benefit as an emmenagogue. Anemonine occurs in fine needle-shaped crystals, and is poisonous in excessive doses.

MIGRAINE PASTILLES.

Medicine Modern recommends the following combination:—

	Grains
Caffeine	1½
Phenacetin	1½
Milk sugar	5

Mix well, and make into a pastille.

IS CONSUMPTION CONTAGIOUS?

ON carefully considering statistics, it is impossible to come to the conclusion from them that the case for the contagiousness of phthisis has clearly been made out; the instances in which transmissibility may be suspected can surely

be accounted for as coincidences in a disease so prevalent as phthisis. We are not aware of any reported cases in which infection has been proved in any of the English hospitals for consumption, although the phthisical patients mix freely and sleep in the same wards as other patients. So writes the *Lancet* in commenting upon a pamphlet published by a Philadelphia physician.

THE EFFECTS OF COCAINE.

DR. ANDREW FULLERTON, of Greenwich, writing to the *Lancet* in regard to the toxic effects of cocaine, calls attention to the value of the drug in the treatment of coryza. He has used solutions of 1 per cent., 2 per cent., 4 per cent., 5 per cent., and 10 per cent. of hydrochlorate, and of these the 2-per-cent. would seem to be the best; but it must be applied by means of a spray to the Schneiderian membrane, as in no other way can the recesses of the nasal cavity be reached. As to the amount necessary to produce dangerous effects, Dr. Fullerton has experienced very unpleasant symptoms after less than 1 grain, and the condition produced by 6 grains sprayed in for experiment was such as to elicit the resolve never to repeat the dose. Weak solutions appeared to be absorbed more quickly than strong ones, and therefore 2 grains in 1-per-cent. solution would seem to be more dangerous than the same quantity in 10-per-cent. solution. The symptoms may come on in a few minutes, and may last three or four hours, or even longer. In small doses a feeling of exhilaration is produced, and the mental faculties are stimulated. If the dose be increased largely, a kind of affective insanity may result, in which illusions, hallucinations, and delusions have not yet made their appearance. Insomnia follows, and is a distressing symptom, and to counteract this chloral hydrate alone appears to give the best results.

ALOES AS A PURGATIVE.

DR. WM. MURRELL, in his lectures on Pharmacology at Westminster Hospital (reported in the *Hospital Gazette*), said, regarding aloes, that it is a tardy laxative, and it may be six, twelve, or twenty-four hours before it operates. It is useless when a prompt action is required. The motions produced by aloes are bulky, a little softened, and not watery. It differs from other purgatives in not producing subsequent constipation. Its habitual use in large doses is said to cause tenesmus, a feeling of weight, beat, and uneasiness in the pelvis, and a tendency to the production of piles, but of this there is no proof. It is said, too, that it induces hyperæmia of the uterus, increases the menstrual flow, and produces sexual excitement. It is often employed as

A "DINNER-PILL,"

the formula for which is:—

Extract of Barbadoes aloes	2 gr.
" " nux vomica	½ "
" " gentian	1½ "

These pills are taken once or twice a day, half-an-hour before meals. They are largely resorted to by elderly people who live well and take but little exercise. They may be taken for years without losing their effect. An old-fashioned dinner-pill, known as Lady Webster's pill, contains:—

powdered Socotrine aloes	2 gr.
" mastic	½ "
" red rose leaves	½ "

Lady Hesketh's and Lady Crespiigny's pills have a similar composition. The formula is a very old one, and it is to be found in the Paris Codex of 1758.

FOR HABITUAL CONSTIPATION WITH ANÆMIA

aloes is often given in combination with iron, a favourite formula being:—

Sulphate of iron	2 gr.
Extract of aloes	1 "

These pills are given at first three times a day, then twice a day, and finally only once a day. They are efficacious, but it may take a fortnight to produce the desired effect. The addition of the iron is a distinct improvement on the simple aloes pill.



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

The first pages of this report deal with the markets up to Wednesday evening. Our reports of Thursday's sales and the latest information are appended under a distinctive heading.

BRITISH MANUFACTURERS AND THE CHICAGO EXHIBITION.—The attitude with which British manufacturers generally regard the invitation to exhibit at the World's Fair in Chicago is gradually becoming more definite. It is shown pretty significantly in the answers which have been sent by the leading Chambers of Commerce throughout the country the circular letter of the Royal Commissioners soliciting their co-operation. Though the London Chamber has courteously accepted the suggestion to form a committee for exhibition purposes, it is an open secret that its individual members do not feel the slightest enthusiasm for the idea of exhibiting their goods. The *Chamber of Commerce Journal* now publishes sixteen replies from provincial Chambers to the Commissioners' letter. Five of the sixteen—viz, Belfast, Birmingham, Glasgow, Middlesbrough, and Wolverhampton—decline to accept the invitation; two, Edinburgh and Sunderland, accept it with an intimation that they do not anticipate that their efforts will produce much result; Leeds talks of considerable apathy and postpones its decision; Bradford also defers; and though the Bristol, Halifax, Keighley, Nottingham, Sheffield, and Wakefield Chambers agree to act as local agents or committees, it is evident from the tone of the letters that some of them, at any rate, do not think it will be of much use. Leeds and Bristol discuss the question whether exhibitors will be allowed to mark the price of their goods in such a manner as to show the extra cost occasioned by the American tariff.

THE LITTLE MYSTERY OF THE PERFUMERY DRAWBACK.—“The Chemical Trade Section of the London Chamber of Commerce met on November 30, when the report of the committee appointed to advise the section as to the best means of preventing the sale of rotten and unsound drugs was received and adopted. The secretary reported the action which had been taken by the Chamber in regard to Pharmaceutical specialties. The main object of the meeting, however, was to consider the probable modification of the Inland Revenue orders of November 23, 1888, and March 23, 1889, relative to the export of tinctures, liniments, or medical spirits, so as to allow of similar facilities being given with respect to essences and perfumed spirits. It was explained that the facilities granted under these orders had worked so well in the drug trade since they had come into force, that there was a prospect of similar facilities being obtained by the perfumery trade. Ultimately it was resolved to add the names of Mr. C. P. Gosnell, Mr. E. V. Barrett (Atkinson & Co.) and Dr. Piesse to the sub-committee of the section dealing with this matter. The perfumery trade have since held a meeting at the Chamber for the purpose of formulating their views, and the matter is still proceeding.” So says the official organ of the London Chamber of Commerce. It will thus be seen that the information which we have given in

the last two issues of our journal was entirely correct, and, moreover, much fuller than that now tardily vouchsafed under a paltry alibi of official sanction.

THE CLOVE AUCTIONS IN ZANZIBAR.—Further particulars have now been received of the first public sale of cloves at Zanzibar. The auction, as we have already announced, took place on November 21, at 9 A.M. The cloves offered were Government property, having been tendered as “payment in kind,” in discharge of export duty. Mr. Gerald Portal and General Mathews attended the sale, and before it began, Mr. Portal addressed the merchants, briefly pointing out that the sale of Government property about to take place, though small in itself, was really most important, as marking a new departure in the trading system of Zanzibar. It was, he hoped, one more important step towards the development of the commerce of Zanzibar. Mr. Portal expressed his firm belief in the practicability of making Zanzibar a great central market for Africa, and in conclusion stated that in a very short time the Government hoped to remove the few remaining restrictions upon trade here, when, he said, all ideas of rivalry or jealousy between Zanzibar and the coast territory must cease, as the prosperity of one would tend to the prosperity of all. The sale was well attended by all European and Indian merchants, and the stock offered was disposed of at fair prices, although heavy purchases for Bombay, during the early part of the week, somewhat restricted the demand. Pemba quality realised \$2.36 to \$2.40 per frazileh, and Zanzibar (new crop) \$2.60. The management of the sales was in the hands of Mr. Hugh C. Robertson, the Receiver of Revenue for the Zanzibar Government. The first sale proved a decided success, and it is hoped that the public auctions, which are to be held fortnightly, will prove a beneficial change from the plan formerly followed of selling the cloves privately.

CINCHONA CANCER AND QUININE FACTORIES IN BRITISH INDIA.—Mr. Lawson, the Indian Government botanist, is now, or was when the last mail left, in the Wynaad district of India, engaged upon some interesting experiments for the cure of canker in cinchona. The quinine manufactory at Nedivatam has been a success, and there is a rumour that a somewhat similar one is to be established in South Wynaad on the co-operative system by the planters. There should be no difficulty (a correspondent thinks) in accomplishing this work, and the saving to the planters would be very considerable; the cost of carriage would be reduced to a minimum, and all the money now paid for baling and shipping bark and to agents for analysing and selling would be saved—to the tune of 25 per cent. or more. With a quinine manufactory and two or three capacious tea factories established in the country, the Wynaad may yet be rehabilitated, and something like the old prosperous days may be restored to the planters.

AMBERGRIS AT A DOLLAR A POUND.—According to a bulletin issued by the American Census Bureau on the subject of the United States whale-fisheries, the aggregate value of the produce of that industry for 1889 contains an item of \$23,200 for a quantity of “ambergris,” weighing 23,200 lbs., and landed at New Bedford, in Massachusetts, by a whaler. No other “ambergris” was obtained in 1889.

THE IMPORTATION OF CASTOR OIL.—The working of the Merchandise Marks Act was peculiarly illustrated in Liverpool this week, when a consignment of castor oil was received from Kurrachee—a new source for this article. On being landed it was sampled and advertised for auction. The Customs officials had meanwhile devoted their attention to the packages, and, as the exterior bore no sign of coming from Kurrachee, they had some cases emptied. It was then discovered that the tins bore the brand “Prime Batoum oil” (petroleum). Instructions were at once given to the importers to suspend operations, and the matter was reported to London. Some days elapsed, but no decision as to the admission of the oil was given. The importers offered to make a declaration that the goods were actually shipped

from Kurrachee, and that the oil was genuine castor oil, the trouble simply arising from the fact that the shippers had acted in ignorance of the new regulations, this being their first shipment to England. After ten days' delay, the importers having been threatened with pains and penalties for leaving the goods on the quay, the authorities decided that the marks on the cases and tins were to be obliterated. This was easily effected so far as the cases were concerned, but a piece containing the obnoxious words had to be cut out of each tin, and then a plain piece soldered in.

ACID (CITRIC).—Dull of sale. On the spot 1s. 4½d. per lb. is the lowest price for second-hand parcels.

ACID (TARTARIC).—The market is very dull at 12½d. to 13½d. per lb. according to brand and condition.

CASTORUM.—The usual winter auction of castor oil by the Hudson's Bay Company took place on Wednesday, when a total supply of 1,480 lbs. was brought forward. The whole of this supply offered was sold at 55s. to 66s. for mouldy thirds to bold, partly extra bold mixed, Canadian firsts (one lot), 70s.; seconds, 68s.; thirds, 64s. to 65s. 6d.; pickings, 60s. to 61s. per lb. These prices show an advance of from 20s. to 22s. per lb. upon those of last year, and are probably the highest ever paid for the drug at any auction.

CINCHONA.—The last cinchona auctions of the year were held on Tuesday. They were of fair extent, the number of packages offered being:—

	Packages	Packages
Ceylon	757 of which	654 were sold
East Indian	775 "	692 "
Java	55 "	55 "
South American ..	417 "	333 "
	2,044	1,734

There was no quotable alteration in the prices upon last auctions, though perhaps the tone, generally speaking, was a shade less firm during the latter part of the auction. The average unit may be quoted at 1½d. per lb.

The following are the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the Mannheim and Amsterdam works ..	102,877
" Frankfort o/M. and Stuttgart works ..	19,510
" American and Italian works ..	62,691
" Auerbach works	42,945
Messrs. Howards & Sons	35,931
Agents for the Brunswick works	4,247
" Freuch works	2,240
Mr. Thomas Whiffen	2,030
Sundry druggists	24,879
Total quantity of bark sold	317,810
Bought in or withdrawn	74,042
Total quantity of bark offered	421,852

It should be well understood that the mere weight of bark purchased affords no guide whatever to the quinine yield represented by it; firms who buy a small quantity of bark by weight frequently take the richest lots, and *vice versa*. The following prices are shown by an analysis of the catalogues to have been paid for sound bark:—

CEYLON CINCHONA.—*Original*: Red varieties—ordinary to good bright quilly branch and stem chips, 1½d. to 3d.; shavings, 1½d.; root (several parcels), 1d. to 2½d. per lb. Grey varieties—ordinary to fair quilly chips, 1½d. to 2½d.; fair shavings, 3d. to 4d.; dusty root, 3½d. per lb. Yellow varieties—very poor Calisaya chips, 1½d.; ordinary to fair ledger chips, 1½d. to 4½d.; root, 3½d. per lb. Hybrid chips, 2½d. to 3½d. per lb. *Renewed*: Red varieties—ordinary to fair chips, 2d. to 2½d.; dusty root, 2d.; shavings, 2½d. to 3½d. per lb. Grey varieties—fair quilly branch and stem chips, 3½d. to 6½d.; poor thin woody chips, 1d. per lb. Yellow common chips, 1½d. per lb.; Hybrid chips, 3½d. per lb.

EAST INDIAN CINCHONA.—*Original*: Red chips, 2d. per lb. Grey chips, dull and woody to fair, 1d. to 2½d.; good fair chips, 3½d.; fine bright quilly mossed chips, 5d. to 5½d.; fair shavings, 2½d.; good root, 6d. per lb. Yellow poor to

good bright chips, 3½d. to 6d.; branch chips, 4d. per lb. A parcel of 82 packages Darjeeling bark (1888 import): Ledger chips, 2½d. to 4½d.; Hybrid chips, 1½d. to 4½d.; root, 1½d. per lb.; other Hybrids: Chips, 1½d. to 3d.; root, 1½d. per lb. *Renewed* red chips, 3½d. to 4d.; yellow ditto, 3½d. to 5½d.; grey ditto, 3½d. per lb.

JAVA CINCHONA.—Ledger chips, 5½d.; dust, 6½d.; root (in dust), 8½d. per lb.

SOUTH AMERICAN CINCHONA.—Cultivated Bolivian Calisaya, in broken quill and chips, 5d. to 6½d. per lb. The following figures represent the exports of cinchona from Ceylon in the period between January 1 and November 23:—1891, 4,881,063 lbs.; 1890, 7,892,515 lbs.; 1889, 8,127,590 lbs.; 1888, 11,886,720 lbs. The shipments of cinchona bark from Java between October 31 and November 11 were about 318,800 lbs. The total acreage under cinchona in Ceylon this season is said to be 9,500 acres. In 1881 it was 45,000 acres.

CLOVES.—The demand is very dull and prices are easier. Only 60 bales *Zanzibar* sold at 3½d. to 3¾d. per lb. for medium to fair. There has been a sale of 300 bales, December-January shipment, at 3½d. per lb., c.i.f. terms.

CREAM OF TARTAR.—Dull of sale at 93s. to 93s. 6d. per cwt., for best white French crystals.

GALLS.—The market for *China* galls for delivery eased off towards the end of last week, and several hundred cases have changed hands at the rate of 49s. 6d. to 49s. per cwt., c.i.f. terms.

GINGER.—About 130 bags African ginger of good quality, old crop, sold at 28s. per cwt. in Liverpool a few days ago. At auction *Cochin* ginger ruled very quiet, and none was sold. *Jamaica* was in good demand, and of 61 barrels 54 sold at higher prices, mouldy to good common at 50s. to 54s.; low medium to medium at 55s. to 59s. 6d.; dull bold, 81s. to 82s. per cwt.

HONEY.—The Liverpool market remains very firm at 40s. to 46s. 6d. for *Californian*, according to quality, with sales at that figure. There is also a fair business doing in Chilean honey at from 36s. 6d. per cwt. downwards.

JALAP.—The New York market is reported to be decidedly easier in consequence of the influx of parcels from Mexico.

OIL (CAJUPUT).—At last Thursday's auctions 15 cases were offered, five of which sold at 2s. 6d. to 2s. 8d. per bottle, without reserve.

QUICKSILVER.—The market is fairly steady. The importers still quote 8l.; second-hand holders offer at 7l. 15s. per bottle.

QUILLAIA.—Chilian quillaia is selling in Liverpool at the rate of 31l. per ton.

QUININE.—The market is exceedingly sluggish. There are sellers of second-hand German quinine at 9d. per oz., but no buyers.

SHELLAC.—Towards the end of last week the market suddenly recovered to the extent of about 2s. per cwt. on orange lac, and sales were reported of about 500 cases orange TN. for delivery in January, at 92s., February at 91s. 6d. to 92s., and March at 93s. per cwt. After this business there were further buyers at the same rates. The market this week opened very firmly, but with little business, the only transaction reported previous to the auctions being about 100 cases orange lac (TN), for March delivery, at 93s., and 100 cases ditto for December-January shipment at 89s., o.i.f. terms. At auction only 118 cases were offered, the whole of which was sold, mostly without reserve, at an advance upon the last sale rates of 3s. per cwt. for second *Orange*, 3s. for *Button*, and fully 1s. for *Garnet* lac. Orange lac fetched 95s. for good pale unworked, 90s. to 91s. for fair bright worked, 86s. to 87s. for fair bright lively. *Button* lac: Rising seconds and thirds, 83s.; ordinary dark rising thirds, 67s. per cwt. Unworked cakey *Garnet* AC brought 94s. per cwt. For delivery the market has been much more active, and closes higher, with sales of about 2,000 cases at 92s. for January, 92s. 6d. to 94s. for February, 93s. for March, and 84s. to 96s. for April delivery. On the spot from 87s. to 92s. per cwt. has been paid for second orange lac.

STICKLAC—There have been some arrivals lately; good Siam, free from wood, is now offering at 95s. per cwt. At the auctions 50 cases of small and dusty quality were bought in at that price.

WAX (CARNAUBA).—The market is quiet. Fair to fine pale yellow is held for 55s. to 65s. per cwt., dark and grey mixed for 45s. to 50s. per cwt.

LIVERPOOL.

ASHES.—The demand continues slow, but sellers still ask 26s. for best *Montreal* pot and 46s. for pearl.

BALSAM COPAIBA.—Demand small, but all parcels held at late prices.

CANARY-SEED.—Prices continue very firm, although demand has slackened for the moment.

CARDISEED—a pretty white seed, said to contain oil, apparently from a species of *Helianthus*—offered this week, but found no buyers.

CASTOR OIL—Practically unchanged since last week. No arrivals and small consumptive demand. Good seconds Calcutta, $2\frac{1}{16}d.$; first pressure French, $2\frac{7}{8}d.$; second pressure, $2\frac{1}{16}d.$ to $2\frac{3}{4}d.$

CREAM OF TARTAR.—The market is a shade easier, and 95s. now value of first white. Several parcels of crude tartars just arrived sold at full prices.

CUTCH.—The market is steady; business done principally in the better brands.

GUINEA GRAINS.—Arrivals and prices are a shade easier.

GUM GUAIAECUM—A parcel of fine offering here has been cleared off the market.

HONEY.—Sales of *Californian* at full prices; 47s. 6d. now asked for fairest. *Chilian* in good demand, and still with an upward tendency.

IRISH MOSS.—The market may be reckoned 30s. per ton better since last week; stocks small and in few hands.

OLIVE OIL is in better demand at steady prices.

QUILLAYA BARK.—Steady, at late prices.

TURPENTINE.—Reported dearer in America, and prices on the spot are stiffening. They show 6d. advance on last week.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent)

SMYRNA, December 16.

OUR opium market remains very firm, but there is no alteration in the quotations given in last week's message. Since Wednesday last the sales amount to 120 cases, all at the prices then current.

THE ALKALINE REDUCTION SYNDICATE (LIMITED).—A special meeting of the shareholders of this company was held on December 15 at Winchester House, London, for the purpose of considering a proposal by the directors of an issue of further capital to the amount of 4,000 5l. preference shares, to bear cumulative interest at the rate of 10 per cent. Mr. Hugh R. Smith, who presided, explained the condition of the company's business at Highburn-on-Tyne. He said that since they commenced working on September 12 they had been producing caustic soda at the rate of 25 tons per week. Their profits to October 20 amounted to 100l. 19s. 7d., but that did not include establishment charges. An output of 25 tons a week would pay the actual cost of production, but, with a further expenditure of some 3,000l., they could produce 50 tons a week, and that would enable them to pay a dividend of 15 per cent., of which the preference shareholders would get one-third. Several shareholders suggested a larger issue than that proposed by the board. The chairman explained the difficulties in the way of these proposals, and eventually the resolution of the directors was agreed to.

THURSDAY'S MARKET NEWS.

CANNON STREET, December 17.

THERE has only been a very limited business in the drug and chemical markets this week. The cinchona sales in London and Amsterdam have terminated without any notable alteration. Castorum has brought higher prices than in any previous year. Ergot of rye is rather slow of sale, China galls, oil of star-anise, and Japan wax are lower. In chemicals next to nothing has been stirring this week. Quinine and quicksilver remain very dull. Shellac has recovered very considerably, pimento is firm, and Jamaica ginger dearer. On the other hand, cloves, nutmegs, and mace are easier. Olive oil (for eating) is lower, East India gums have declined in value, and German potato spirit for forward delivery may be had at lower prices.

SOLID SULPHURIC ACID.—We have just been shown a sample of a substance placed upon the market under the name of "sulphated salt," and which is stated to contain 75 per cent. of available sulphuric acid, of 1.84 s.g. This salt, it is further said, can be used, when dissolved in water, for the majority of operations in which the ordinary sulphuric acid of commerce is employed. The chemical, if it should prove all that its manufacturers claim it to be, will put an end to the difficulties and dangers now attending shipping sulphuric acid. It is a solid substance, having the appearance of caustic soda, and is packed in iron drums in the same manner as that substance. It is said to melt at 200° F., and to solidify again on cooling, to be readily soluble in its own weight of water, and, in solution, to be reducible to any required strength. It is manufactured in England.

THE SALE CONDITIONS FOR SHELLAC.—At a recent meeting of a committee of brokers and dealers in shellac it was decided to revert, on January 1, to the old conditions of sale for shellac—viz., three months prompt. Only a short time ago shellac was made a "14 days, less 2½ per cent." article, mainly in the hope that increased stringency in the conditions of payment would check speculative business in the article.

ALCOHOL.—On the spot, and for delivery early next year German potato spirit is unaltered in price, but for May delivery the quotation has been reduced to 14d. per proof gallon, c.i.f. terms.

ANISE.—Chinese star-anise on the spot is still held for 100s. per cwt.; but for arrival it is offering at 91s. per cwt., c.i.f. terms.

BROMINE SALTS.—The English manufacturers of bromides have withdrawn all quotations, "in consequence of the unsettled state of the bromine market." Orders will be executed at the rate of the next price to be fixed by the makers. The German bromine convention, which would have expired on December 31, has been renewed, and there does not at any rate appear to be much prospect of lower rates.

CAMPHOR (CRUDE).—On the spot prices remain unaltered, at 132s. 6d. to 135s. for *Japan*, and about 5s. less for *China*. The prices asked for delivery are so high as to prevent most business.

CAMPHOR (REFINED).—A firm market. English unchanged. German is quoted at 1s. 6½d. per lb. for immediate delivery. For February delivery prices, however, are higher.

COCCULUS INDICUS.—The market is reported cleared, sales having been made at 11s. per cwt.

ERGOT OF RYE.—The market is quiet and somewhat easier. Fair Spanish is offering in some quarters at 2s. 9d. per lb., though others still ask 2s. 10d. per lb.

GALLS (TURKEY).—The market remains very firm at 75s. for good blues, while for white galls 57s. 6d. per cwt. is asked.

GUM ARABIC.—At to-day's auctions large supplies of East Indian gum arabics were offered, but met an exceedingly poor demand. Altogether about 4,000 packages were offered, of which scarcely 500 sold at slightly lower rates for *Ghatti* and brown *Amrad*, while Adon gum declined from 2s. to 5s. per cwt. The following prices were paid: *Australian*, ordinary dark glassy to fair reddish drop, 23s. 6d. to 29s. 6d.; *Cape*, ordinary brown glassy and blocky, 17s.; *Aden*, good red sorts, olibanum-scented, 45s.; good pale ambery sorts, 47s. to 47s. 6d.; fine siftings, 26s. per cwt.; *Amrad* drop, ordinary brown to fair amber, 30s. to 40s.; common to good pickings, 16s. to 28s. 6d.; siftings, 15s. to 24s. 6d. per cwt.; *Ghatti*, good pale, 50s.; medium to fair brownish, 24s. 6d. to 26s. 6d.; ordinary woody to good pickings, 12s. 6d. to 17s. 6d. per cwt.

OIL (ANISE.)—Market dull and slightly easier, with sales at 6s. 3d. per lb. on the spot, and 5s. 10d. per lb., c.i.f. terms, for arrival.

OIL (OLIVE.)—New Bari eating-oils range in value from 3s. 9d. to 5s. 6d. per gallon, according to quality. This is a reduction of about 3d. per gallon on recent quotations, and prices may decline still further.

WAX (JAPAN.)—Good pale squares have sold at 42s. 6d. per cwt., which shows a decline in price.

THE AMSTERDAM CINCHONA AUCTIONS.

(Telegram from Our Correspondent.)

AMSTERDAM, Thursday Evening.

At to-day's auctions 5,380 packages Java cinchona sold at a slight reduction in price, as compared with the last sales, the average unit not exceeding $5\frac{3}{4}$ cents, or about $1\frac{1}{16}$ d. per lb., which is on a par with this week's London auctions. The following was the range of prices:—Manufacturing barks in quills, broken quills, and chips, 7 to 75 cents (= $1\frac{1}{4}$ d. to $11\frac{1}{2}$ d. per lb.); ditto root, 10 to 44 cents (= $1\frac{1}{4}$ d. to 8d. per lb.); Druggists' barks in quills, broken quills, and chips, 10 to 36 cents (= $1\frac{1}{4}$ d. to $6\frac{1}{2}$ d. per lb.); ditto root, 12 to 19 cents (= 2d. to $3\frac{1}{2}$ d. per lb.). The principal buyers were Mr. Gustav Briegleb, the Amsterdam quinine-works, and the Brunswick quinine-works.

BRITISH AND FOREIGN CONSULS' REPORTS.

ARGENTINA.

Pharmaceutical Preparations. The importation of medicinal and other drugs, perfumery, oils and varnishes has diminished largely, says the Austrian consl, since the time when the Argentine Republic fell upon evil days financially. But at the same time there has been a constant increase in the importation of pitch, salt, stearin, bicarbonate of soda, and sulphuric acid. The production of the latter article, as well as of certain other heavy chemicals, has increased considerably in the Argentine Republic during the last few years.

ITALY.

Sulphur-mining in Sicily. There has lately (says our consul at Palermo, in Sicily) been a remarkable rise in the prices of sulphur in Sicily, due to several causes, among them the gradual exhaustion of the stocks at the outports, the closing of several mines, and the lessened production of last year. Unfortunately, this has so elated the owners of some of the mines that they have begun to extract more mineral than is required, and prices are already going down. The exportation of brimstone from Licata in 1890 remained 6,000 tons short of what it was in 1889, but its value amounted to 96,075*l.* more than in the previous year. The rise in the prices of this mineral during the second half of 1890 was as important as it proved to be unexpected and brisk, and it is due to the smaller production of last year, which is reckoned to have been 45,000 tons less than in 1889. Many mines in the Licata district which for some years were compelled to check their

production, and even stop work, attracted by the fair prospects of the present high prices, have recommenced active work, and during the autumn of 1891 will throw a great quantity of sulphur on the market. In the Girgenti district many of the mines were flooded in the winter of 1890, owing to heavy rains, and could not work. Altogether the season was a favourable one to those engaged in the trade. Those working the mines are content if the prices remain at 3s. 9d. per cwt., and, when one compares the present cost of transport and of miners' wages with what they were twenty years ago, this price may be considered excellent.

MEXICO.

Foreigners. The following are the numbers, according to a census taken in August, 1889, of the members of the most largely-represented foreign nationalities in the city of Mexico:—Spaniards, 3,391; French, 1,261; Americans, 780; Italians, 444; Germans, 363; and English 227.

Hints to Exporters. Firms desirous of doing business with Mexico, says our consul in that capital, must be prepared to send out competent agents to study the requirements of the country, and to establish personal relations with the firms with whom they propose to deal. As the duties often represent 100 per cent. of the value of the goods, it is not easy to find merchants who will accept shipments on commissions unless upon payment of the duties by the exporter. Ordinary catalogues, especially unpriced ones, are of little use in obtaining orders, yet in one case a Liverpool firm, exclusively through the excellence of their price-list—which, indeed, was a model of comprehensive detail—obtained a connection in the city of Mexico worth a turnover, in a short space of time, of several thousand pounds.

RUSSIA.

The Duty on Chemicals. Under the new Customs tariff the Russian duty on chemicals has been considerably increased; thus, caustic soda, hitherto 72c. gold per pound, will now pay 90c. gold; bleaching powder, from 52c., is now dutiable at 70c. gold; borax, from 11c. gold, has been raised to 120c. per pound. Business in these particular goods is said to be at a standstill, the consumers not being able to pay the increased price. The rates under this head are, in fact, prohibitive, as they are intended to be, with a view to benefiting the native manufacturers. To what extent that object was already attained under the old, and (compared with the new) moderate tariff, appears from the following rates of dividend yielded by some of the leading Russian factories. The return is for 1889:—Russian Seed-crushing Company, 25 per cent.; Thornton's Woollen Manufactory, 40 per cent.; Neva Cotton Mill, 40 per cent.; Artificial Mineral-water Company, 82 per cent.; Russian-American Indianrubber Company, clear profit on foundation capital, 86·4 per cent.

TURKEY IN EUROPE.

Salonica Opium. The cultivation of the poppy for the preparation of opium was first introduced into Macedonia in 1848. The first experiment was made at Istib with seed imported from Smyrna. In 1850 a crop of about 450 lbs. of opium was raised and consigned to London. There the quality was considered superior to that of the Asiatic product, and realised higher prices. Since then the opium-culture has spread year by year.

The best quality is still harvested at Istib. The poppy-plant strikes deep roots, and is therefore not very susceptible to drought. In 1890 a medium crop of 750 to 800 quintals was obtained. The average value of the annual opium exports from Salonica is 112,000*l.*

MR. J. W. SHEPHERD, of Settle, Yorkshire, who has carried on business for many years as Armistead & Shepherd, has removed to new premises and takes the opportunity of styling his business by his own name simply.

THE MANUFACTURE OF LANOLINE was the subject of the paper read to the Dundee Assistants' Association last week. The author, Mr. Petrie, made a good appearance, in which the specimens lent by Messrs. Burroughs, Wellcome & Co. helped him.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only: and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

The Drawback on Perfumery.

SIR,—With reference to the leading article in your last issue, for once your excellent journal has made a mistake, for, although at times it may be easier to obtain particulars of what takes place at private over public gatherings, yet you have not been correctly informed as to the proceedings of the last meeting of the chemical section of the Chamber of Commerce. It was not considered prudent to have reporters present at that meeting, as whilst the negotiations with the Somerset House authorities are going on, it was thought neither to be fair to them nor in the interests of the trade at large that what is taking place should be publicly reported; but there is every reason to believe that when the final issue is determined it will be found that, through the action of the chemical section, the perfumery trade, as a whole, will have derived benefit in the same way as did the manufacturers of tinctures and medicinal alcoholic preparations from the previous action of the section.

Yours truly,

1 Fenchurch Avenue, E.C., CHARLES WIGHTMAN,
December 14. Chairman of the Chemical Section.

[Mr. Wightman might have told us in what respect our article was in error. The principal statements in our article we can vouch for, and we are quite prepared to believe that some of the facts were new to the innermost committee of the London Chamber of Commerce. That the perfumery trade generally will benefit from the adoption of the drawback system by the Treasury we do not doubt; but Mr. Wightman's letter does not remove the suspicion, which we suggested, that the chemical section of the Chamber of Commerce is working rather in the interest of a few monopolists than in that of manufacturers of perfumery generally.—ED. C. & D.]

SIR,—We have read your editorial on the subject of the drawback on perfumery. We personally were present at the meeting, and consider that your reporter has taken a most prejudiced view of what took place. There has never been any desire on the part of the perfumers already enjoying the privilege of manufacture in bond, to hold a monopoly of this manufacture, or to debar the smaller makers from the same facilities, and there was no such idea broached in any way at the meeting. The manufacture of tinctures under drawback is a totally different matter from the manufacture of perfumes. The tinctures are always supplied in bottles of imperial capacity, and consequently the ascertaining of the quantity shipped is an easy matter, whereas perfumes are put up in bottles of various uncertain contents, and the ascertaining these contents, by the Excise is a complicated matter. We are distinctly opposed to any change. The manufacture for export in bond has gone on with perfect satisfaction and without a hitch of any description for forty years, and there is no necessity whatever for a change.

All export manufacturers are aware of the fact that shipping instructions are constantly received requiring shipment without a moment's delay—the Customs gaugers are constantly on the spot in the docks, and their services can be had at a moment's notice; whereas under the Excise we

believe a notice of a certain number of hours is requisite before an officer can be in attendance. We quite acknowledge that if a change could be effected without prejudice to any rights and facilities already enjoyed, the objections to the change would be reduced to a minimum; but we very much doubt its practicability. Furthermore, your reporter seems to overlook the fact that all manufacturing perfumers, whether small or large, had precisely the same facilities granted to them for manufacture in bond, and those who did not choose to avail themselves of these facilities when offered, have no right to accuse those who were a little more enterprising of desiring to secure a monopoly. We are not aware that up to the time when we received notice of the contemplated change, that there was any objection to granting authority for the manufacture in bond to whomsoever might apply for it.

We maintain that in common justice no alteration should be forced upon those who by enormous outlays of money in advertisements, &c., have built up their trade abroad, and if the alteration is forced by the Commissioners of the Treasury, those already enjoying the privilege of manufacture in bond should be at liberty to elect whether they will remain in bond under the Customs or under the Excise and the new regulations.

We are, dear Sir, yours faithfully,

Dec. 15.

F. S. CLEAVER & SONS.

[The above letter was received after our Editorial Note on the subject was in type. It is not one of the communications therein alluded to, but it expresses the views which we argue should not have the support of the chemical section of the London Chamber of Commerce or of the perfumery trade generally. It is reported, however, that the Treasury are inclined to concede the claim.—ED. C. & D.]

The Vaseline Famine.

SIR,—In reply to the communications from chemists published in your last issue, and to numerous similar ones sent directly to us, including round-robins and anonymous letters, we beg to say that we cannot perform the impossible and supply what we have not got, but that as soon as we have any left over after filling our daily orders for our smaller sizes and preparations, we certainly do intend to again sell "vaseline" in 5-lb. tins.

That chemists should feel sore because their supply of bulk "vaseline" is cut off is quite natural, but they should look at the other side of the question for a moment.

Evidently there can be no perfect safety for the public nor for us if all of the 100,000 chemists in the world take the right to buy "vaseline" in bulk and bottle it for their customers. How are we to know that they do not use something else and label it "vaseline" and thus deceive their customers and defraud us? As a matter of fact, it is notorious that large numbers of them are doing this very thing. Nearly every letter we receive from chemists admits this fact, and deplores its existence, and still they will not see that the true way to prevent it is to sell original packages only to the public and use the bulk only for their prescriptions and ointments. Neither is there any excuse for re-bottling, as we put up "vaseline" for sale in 1d., 2d., 3d., 5d., 6d., 1s. and 2s. packages. On most of these goods chemists can make nearly 100 per cent. profit, while we get a manufacturer's profit only. Again, chemists should remember that "vaseline" was introduced to the public at great expenditure in money, time, and hard work by us, and not by them, and in all fairness we are entitled to both protection and to some profit. When a chemist sells a 2-oz. bottle of blue seal at 5d., which costs him a little over 2d., he makes over 120 per cent. profit, while it must be evident there can be but little left for us after paying for the vaseline, bottle, cork, labels, box, freight, rent, salaries, and advertising. We do all the work, provide the customer, and they practically get the profit; and why should they not be satisfied, if we are? The question appears to be a new one, but we do not believe that the law of England will permit a dealer to purchase an article in bulk, pack it in smaller sizes, and then to sell it stamped with the trade-mark of the manufacturers. At all events, we have never sanctioned this course, and we propose to have it legally adjudicated. Although the position has been forced upon us by the logic

of the situation, one good result will flow from the withdrawal of bulk. We shall soon be able to discover those who sell imitations as "vaseline" and thus violate our trade-mark, and to such we shall turn our attention hereafter.

London, December 15.

CHESEBROUGH CO.

The Discovery of a Mydriatic Alkaloid in Lottuce.

SIR,—If, as I surmise, Mr. Dymond obtained the suggestion for his excellent investigation of this subject from Mr. Ransom, sen., of Hitchin, perhaps it may be interesting to him to know (if he does not know, or to chemists generally if he does) the origin of the discovery.

While working in the laboratories of Messrs. Harker, Staggs & Morgan, I had occasion to examine a batch of ext. lactuce viros., supplied by Messrs. Ransom & Son, of Hitchin, about the end of June of this year, my attention having been called to its close resemblance to belladonna extract. To my great surprise I found that a solution of the extract in water dilated the pupil of the eye, and by acting upon a sufficiency of the extract I was able to obtain enough alkaloid to give the general reactions for atropine. Being very busy at the time, I was only able to make an approximate estimation, and on referring to my note-book find the amount present was about 0.3 per cent. Messrs. Ransom were then communicated with, and they, in reply, guaranteed the purity of the extract, stating that it was an impossibility for it to be contaminated with belladonna under any circumstances; Mr. Ransom, sen., even substantiating his faith in the extract by taking quite 5 grains in my presence without, as he assured me, any injurious effects. Unfortunately, I was unable, by stress of circumstance, to carry this interesting matter to its logical conclusion at that time, although I succeeded in obtaining similar results from another sample of extract.

Mr. Dymond's opportunity of turning Messrs. Ransom's knowledge of these facts to such excellent account is my loss, but the gain of the pharmaceutical world.

My only regret is that Messrs. Ransom did not think it necessary to acquaint me with the fact that Mr. Dymond was working upon the subject, and thus prevent me from entering into a handicapped race with the Research Laboratory of the Pharmaceutical Society.

I need hardly say that any communication I might have made upon the subject would have been to pharmacists direct, and not through the medium of some other society. It is to be regretted that work done in the Research Laboratory cannot be communicated to pharmacists who pay so heavily for it; but I suppose the "*kudos*" would not be so great.

Yours truly,

FRANK B. THORNTON.

Disinfectants and How to Use them.

SIR,—I observe that at the last meeting of the Chemists' Assistants' Association some discussion took place concerning disinfectants, and I shall be glad if you will afford me space to make a few observations with reference to this subject in your valuable journal.

The president, in defining the qualifications of a good disinfectant, included a "distinctive colour," although if a preparation be "effective," "of peculiar smell," "does not stain," and is "non-poisonous," I hardly see where the necessity of a distinctive colour comes in. It is all very well to colour a disinfectant preparation that is poisonous, but the desirability does not apply to a non-poisonous one; besides which, articles of colour are apt to stain.

No doubt every patentee or manufacturer will consider his own preparation to be the best, but at least I may claim that in the ordinary "Sanitas" fluid of commerce we have one which meets all the above-named essential qualifications.

There is much to be said respecting how best to use the one disinfectant that is chosen, but the truth of the matter is that no one preparation can be used for all purposes. For certain purposes, for example, it is advisable to apply a disinfectant in the liquid form by means of a spray-producer, in other cases the object is better accomplished by vaporising a volatile preparation, such as "Sanitas Oil," while yet again at other times the use of a preparation in the form of powder is indicated, and so on. No doubt an excellent way

of using a disinfectant for some purposes is to suspend baskets filled with absorbent material saturated with a volatile disinfectant. That idea is realised by the use of the "Sanitas Disinfectant," but such an appliance is obviously of no service for disinfecting, say, the excreta in cases of typhoid fever. For such an object a liquid or powder preparation is obviously required, for it must be brought into thorough contact with the matter to be disinfected. Then, again, in ordinary water-closets, it is not essential, although it may be advisable, to disinfect the contents of the pan; they are carried away by the flush-water, and it is the business of the local health authority to see to the proper treatment of sewage. It is enough for the occupants of houses to see that infection does not take place through the air, and in this connection the use of disinfectors of the kind I have referred to is, of course, to be strongly recommended.

Yours faithfully,

C. T. KINGZETT, F.I.C., F.C.S.

(Inventor of the Sanitas Disinfectants and Appliances).

Stokes's Liniment.

SIR,—I notice in your Answers column, in reply to "Phosphate," in your last issue, you state that in Ireland a mixture of chloroform, soap-liniment and morphia is given for Stokes's liniment. I have been in the business for over fifteen years, in different parts of Ireland, and have never seen such a mixture supplied, and have sold to retail chemists and physicians many gallons of Stokes's liniment, and in all cases it has been made according to the formula you give as correct. Your Irish informant must have had a limited experience of what is usually given.

Yours truly,

Belfast.

W. H. MADDEN, M.P.S.I.

Mr. Fitch on Poisons.

SIR,—Allow me to point out an error that you fall into in commenting on the cutting from *Bury and Norwich Post* from myself that appears this day in your interesting and valuable journal.

A fact half told is the worst story out. You charge me with this:—"Not very long ago that gentleman, in a letter to this journal, stated that he always charged 6d. for every 3d. of poison he sold, and advised other chemists to do the same."

I have not this letter by me, and have not the old journals to refer to. What I intended to convey, and believe I wrote, is quite the reverse. I never in my life charged 6d. for a 3d. article; the reason is quite obvious—no one would pay it. What I intended to say, and believe I did, was "that I did not sell 3d. packets of Battle's Killer, and that I sold only the 6d. packet," which is a very different transaction to doubling the price.

I think it is rather begging the question to endeavour to mislead public opinion by stating that carbolic acid has not yet obtained the first place among poisons which occasion death; to quote a poet, "If it is not the first word, it is the very first line."

Yours faithfully,

ROBERT OWEN FITCH.

255 Woll Street, South Hackney,
December 12.

[We did not intentionally misrepresent Mr. Fitch. In his letter, which we published March 29, 1890, occurred the following paragraph:—

It has been my habit to serve every listed poison in part 1 of the schedule (myself) that is asked for by anyone I know, or is introduced by someone also known, if an intelligent account can be given of its intended use, and on no occasion to charge less than sixpence. I lately completed filling one poison-book; the first sale registered is February 15, 1867, the last April 10, 1883, embracing twenty-one years; in that time I made one thousand sales, which at sixpence each amount to twenty-five pounds—that is, about two shillings per month, which at two-thirds profit amounts to fourpence per week. Recollect that is at the sixpenny selling, so that those in the trade who oblige with three-pennyworth of Battle's Killer and such like, by a parity of sales, earn but twopence per week. Now in these poison sales the chemists have a perfect monopoly—no other trade may sell them; so as a union we could, to use Mr. Cartwright's phrase, "stiffen our backs" and resolve to negotiate none under one shilling.

Most chemists would understand that paragraph to mean that he charged 6*d.* for every three-pennyworth of poison he sold, and that he aimed to get 1*s.* for it.

At to the position of carbolic acid in regard to fatalities, Mr. Fitch says, "It is a known fact that carbolic acid is responsible for more deaths than all the scheduled poisons together." Knowing better, we thought it was our duty to correct this statement. We said, "Carbolic acid has not yet attained the first place among poisons which occasion death." According to the Registrar-General's returns for 1889 (the last published), carbolic acid was responsible in that year for 27 accidental deaths and 41 suicides, while opium and its derivatives scored 83 accidental deaths and 43 suicides. Mr. Fitch accusing us of endeavouring "to mislead public opinion" on this point reminds us of Esop's anecdote of the wolf and the lamb—ED. C. & D.]

Inadvertent Infringement.

SIR,—My attention has been called to a paragraph in your issue of December 12, with regard to the case *Halcrow v. Allen* (Kreat Halviva), Chancery Division.

I wish to explain to you, and to my fellow-chemists, that, after perusing the somewhat extensive correspondence in the various newspapers concerning this medicine, I was clearly under the impression that the word "Halviva" connected with the word "Kreat," was the systematic botanical Indian name for the Kreat, little dreaming that either of the words was registered as a trade-mark; and I unwittingly advertised my preparation in the *Western Morning News* (a paper having the largest circulation in the West of England) and soon experienced the painful result you have commented on in your paragraph.

It is unfortunately a serious omission that the Trade-marks Act does not make it compulsory on all owners of registered trade-marks to state the fact, when and wherever they are used, that they are registered; and it is to be hoped that before long the Legislature will make this point *a sine qua non* in the Act, by introducing a clause which would bar an action in any case of infringement of trade-marks where this is not duly notified.

1 George Street, Plymouth, I am, yours faithfully,
December 14. J. ALLEN.

Our Christmas Fund.

SIR,—In another week's time, if history repeats itself, we shall be getting a shoal of letters to this effect:—

"We, the employés of [we got one signed 'the employers of'] your customer, Mr. —, beg for a contribution towards our Christmas fund. Wishing you the compliments of the season, &c."

To our certain knowledge the employés so specified have in more than one case been constituted of one apprentice and an errand-boy.

Without condemning this practice altogether, we reserve our opinion on this point. We maintain that, in justice to the employers, these requests should be seen by them, and we do not mean to respond to any unless their signatures be attached. It is simple enough to have the additional words "Sanctioned and approved by employers, So-and-So."

Yours truly,

WHOLESALE DRUGGISTS. (186/70)

Mr. McFall's Nitrometer.

SIR,—With regard to your footnote to a short paper on a form of nitrometer by myself, read before the Chemists' Assistants' Association, so far as I am aware, the idea of using a burette in the place of a graduated nitrometer-tube was first given in *THE CHEMIST AND DRUGGIST*; but may I be allowed to point out that there is the same difference between the form given in *THE CHEMISTS' AND DRUGGISTS' DIARY* for 1886 and the second form, figured by myself, as there is between an ordinary nitrometer and my first form?

Yours respectfully,

41 Montpelier Road, N.W. J. E. W. McFALL.

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

Bism. Subnit. and Sodii Bicarb. in Mixtures.

SIR,—Your remarks in an Editorial upon the dispensing of bismuth and soda mixtures indicate the divergence of opinion that exists in this matter. About a year ago my friend Mr. J. D. Allman drew my attention to the fact that the incompatibility was little known to the medical profession. In evidence of this he quoted Drs. Lauder Brunton and Mitchell Bruce as recommending, in their respective works, the exhibition of these two salts together. On the other hand, Squire's "Companion" and Martindale's "Extra Pharmacopœia" clearly indicate the acid nature of the subnitrate and its incompatibility with alkalies. Moreover, I am aware that at more than one of the leading dispensing establishments it is a constant practice to invariably substitute carbonate for subnitrate of bismuth when ordered in a mixture with alkaline carbonate. It appeared to me that it would be of considerable interest to learn the views of both of these medical authorities as to the combination in question, and the methods adopted by pharmacists to avoid accidents which would otherwise occur. Their replies were as follows:—

10 Stratford Place, W.

I am very much obliged to you indeed for your letter, and I shall take occasion in the next edition of my book to rectify the error to which you refer. It has, indeed, come before me, since the book was written, in teaching my practical class of materia medica at St. Bartholomew's Hospital, and I have, to a great extent, given up using the subnitrate of bismuth with alkalies, prescribing the carbonate in place of it. I almost never gave more than 10 grs. of subnitrate of bismuth with 10 of bicarbonate of soda to each ounce of fluid, and generally combined with it 10 minims of spirit of chloroform.

T. LAUDER BRUNTON.

70 Harley Street, W.

Very many thanks for your letter about the bismuth salts. I quite agree with what you say respecting the subnitrate effervescing with the alkaline carbonate. As a matter of fact, I invariably prescribe bismuth subnitrate and bicarbonate of soda in powder form; or an alkaline mixture with each dose of which the patient is to add a bismuth powder. I have made a note of all you have kindly told me for future use, when I have an opportunity of rectifying the error.

J. MITCHELL BRUCE.

The proportions given by Dr. Lauder Brunton may usually be safely dispensed, but if larger proportions are ordered, I am still of opinion that it is best to substitute carbonate for the subnitrate of bismuth. It will be seen that in the above courteous replies I failed to elicit a direct opinion on this practice, but Dr. Lauder Brunton's admission of prescribing carbonate instead of subnitrate is confirmative. Undoubtedly, the best methods of obviating the difficulty are those given by Dr. Mitchell Bruce, and, if they are brought before the notice of physicians, will, in all probability, be generally adopted.

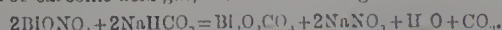
Yours faithfully,

40 Charlotte Street, E.C.

E. J. MILLARD.

[Mr. Millard has done well by getting the opinions of two such eminent therapeutists on this matter; but they do not justify a general recommendation to substitute the subcarbonate for subnitrate of bismuth in such cases as those under discussion. We think the advice given in "The Art of Dispensing" is the more consistent. There it is stated—

Subnitrate of bismuth reacts with bicarbonate of soda or potash with liberation of carbonic acid gas, the reaction being:—



The reaction is sometimes slow, but if it does not occur in dispensing the prescription, it is apt to take place after the mixture is sent out. Some dispensers use subcarbonate of bismuth instead of the subnitrate, but this course cannot be followed without sanction. The best plan is to place the subnitrate and bicarbonate in a mortar and pour a little boiling water upon them, when effervescence takes place immediately.

For other reasons than mere consistency this plan is preferable to that followed in some of the leading dispensing establishments. In the case of Dr. Brunton's prescription

(10 grains of each salt), while the whole of the subnitrate is converted into subcarbonate, only 28 grain of sodium bicarbonate is altered. Nor should it be forgotten that the bismuth subcarbonate which is formed is in a much better state for administration than the dried subcarbonate; it has not changed from the hydrated condition, and is in finely divided form. The only objection to the use of hot water is that it may *per se* cause loss of carbonic-acid gas from the sodium bicarbonate, but this can always be limited by taking bicarbonate to the extent of a fourth of the weight of the subnitrate prescribed, and using this for the double decomposition, the rest going into the mixture. Which course do dispensers generally prefer?—ED. C. & D.]

Liquor Podophyllini.

162/18. *Pax cum Honore* asks what should be given for this. It would be useful to have post-card expressions of opinion on the point.

Alkaline Emulsion.

187/27. *Tydderi* wishes to know if a good emulsion can be made of the following prescription:—

Potass. carb.	..	..	..	..	grs. 45
Ol. olivæ	..	..	..	..	3j.
Aq. menth. pip. ad	..	..	..	..	3viij.

M.

[Dissolve the carbonate of potash in 1 oz. of the peppermint-water, and shake the olive oil with the solution; then add the remainder of the peppermint-water, $\frac{1}{2}$ oz. at a time, shaking well.]

186/58. *Aloin*.—The alkalies react with the sulphate of magnesia, precipitating magnesium hydrocarbonate.

A Salicylate Prescription.

146/26. *Bland*.—The excess of sulphuric acid in the following prescription reacts with the sodium salicylate:—

Sodæ salicylat.	..	..	..	..	grs. v.
Quinin. sulph.	..	..	..	..	gr. j.
Ferri sulph.	..	..	..	..	grs. ij.
Mag. sulph.	..	..	..	..	3ss.
Acid sulph. dil.	..	..	..	..	℥. iiij.
Aq. ad	..	..	..	..	3j.

4tis horis. sd. Mitte 3viij.

In the 8-oz. mixture less than 4 grains of sodium salicylate would be acted upon, so that the freed acid would give little trouble. It is the quinine salicylate which is formed and precipitated which makes the mixture a nasty one. The violet colour of the ferric salicylate (almost impossible to avoid) is also objectionable. Our correspondent asks the opinions of his fellow-dispensers as to what should be done.

LEGAL QUERIES.

Consult Alpe's "Handy-book of Medicine-stamp Duty" in regard to patent medicine questions.

General information regarding the laws affecting chemists and druggists is printed in THE CHEMISTS' AND DRUGGISTS' DIARY, 1892, pp. 161-5.

For stamp duties, licences, Customs regulations, &c., see the DIARY pp. 151-9.

183/64. *T. M.*—There seems to be no resemblance between the two wrappers. It would be impossible for any manufacturer to get a monopoly in the picture referred to, and in No. 2 the picture is as different as it can well be.

185/11. *Ploughman*.—It has been always decided that when you are asked for milk of sulphur you may sell the calcareous compound. The question whether in such a case you would do wrong by selling precipitated sulphur has never been raised. See articles in this journal, August 15 last.

185/56. *Orthodox*.—Read the note in the DIARY a little more carefully. It is not an offence against the Apothecaries Act to give medical advice, nor to advertise that such will be given. There is no penalty for "acting as a physician." A great many herbalists, however, do act and practise as apothecaries, and some of them have been fined for doing so.

188/65. *Nemo*.—It is illegal for a person not on the register of chemists and druggists to sell by retail an arsenical sheep-dip. Only the Pharmaceutical Society can prosecute. We do not know whether they would be likely to prosecute; but you might ask them, or interest their local secretary in the matter.

189/18. *Z. Y. X.*—Anyone may use any of the descriptions you suggest.

154/25. *Subscriber*.—There is no recognised rule in the trade that the employer must pay the travelling expenses of assistants who come to him on a month's trial, and in law the employer can only be compelled to pay that which he has contracted to pay. Of course his letter may have been so expressed as to justify the demand. The assistant has no legal claim to be paid for time occupied in travelling to or from the situation.

189/34. *Botanic*.—Anyone may describe himself as a cattle-doctor.

189/42. *Want to Know*.—Laudanum must be tinct. opii, B.P. That has been decided in the High Court. We think a court would require friar's balsam to be tinct. benzoini co., B.P., but that soap liniment and compound camphor liniment made with methylated spirit and the so-called methylated ether may be legally sold when soap liniment, compound camphor liniment, and ether are asked for.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

A list of "Books for Chemists" is given in THE CHEMISTS' AND DRUGGISTS' DIARY, p. 317.

For all particulars regarding Educational and Examinational matters refer to our issue of September 19, 1891.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulae, &c., occasionally referred to in answers, can be obtained from the Publisher at 4d. each.

130/13. *G. B.*—There is not a lin. iodi decolorat. You did right in dispensing the tincture.

181/30. *C. H. F.*—Transparent Varnish:—

Common resin	..	..	..	..	1½ oz.
Sandarac	..	..	..	..	1½ "
Mastic	..	..	..	..	1 "
Spirit to	..	..	..	..	1 pint

Coarsely powder the resins along with a few ounces of broken glass, and macerate in 16 oz. of spirit until dissolved. Then strain, and make up to 1 pint.

181/16. *Pneumatic*.—The simplest method for Bleaching Rape and other Seed Oils, if you cannot expose them to sun-light, is to shake the oil with an eighth of its bulk of 10-per-cent. potassium-permanganate solution in dilute sulphuric acid (1 in 8). Separate, and wash with water.

179/19. *H. J. S.*—(1) See reply to "K. A." (2) Only those coloured red, which become black on heating.

179/74. *Liverpool*.—See those mentioned in the DIARY.

179/57. *N. V. Z.*—Quillaia (1 in 12) is used for producing the foam of tooth-washes. The menstruum for it is: Spirit, 1 part; water, 2 parts.

179/45. *Devon.*—(1) Warington's "Chemistry of the Farm" (Bradbury, 2s. 6d.); Johnston & Cameron's "Elements of Agricultural Chemistry and Geology" (6s. 6d.). See also the DIARY list.

180/52. *Cymro* (Madeira).—Peroxide of hydrogen (10-vol. solution) is used alone for bleaching the hair, but it frequently fails to bring about a satisfactory result. In any case it must be used daily for several weeks before black hair yields to it. Fresh nitro-muriatic acid was at one time used, and we have seen it noted that something of this kind was used for Madame Patti's hair, which, however, was afterwards dyed auburn. We shall be glad if any subscriber who has knowledge of Parisian methods would communicate with us. (2) You may make non-greasy stick rouge by mixing 1 part of rouge with 4 parts of French chalk, massing with mucilage of tragacanth.

126/91. *J. T. G.*—We have it in hand.

126/37. *B. L. B.*—Two grains of salicylic acid or 5 grains of boric acid to the ounce acts as a perfect preservative of acacia mucilage, but such mucilage cannot be used in dispensing.

177/52. *Pepsin.*—It is supposed that pepsin is not so active in presence of antiseptics, but the knowledge on the subject is somewhat empirical. No chemical action takes place between pepsin and carbolic acid. A pill containing these will certainly exhibit the properties of pepsin.

177/55. *Ajax* (Southsea).—Cold-cream:—

White wax	..	..	..	..	3 oz.
Spermaceti	..	..	..	..	3 "
Almond oil	..	..	..	..	16 "
Rose-water	..	..	..	..	8 "
Otto of rose	..	..	..	..	20 drops

Melt the wax and spermaceti by the heat of a water-bath, add the almond oil, transfer to a warmed mortar, and add the water little by little, stirring at first constantly, then at short intervals, until the cream is thickish. At this stage add the otto.

Chloroform is a good preservative. It may be used in the same proportion as the otto, and mixed with it.

174/62. *J. M.* (Singapore).—(1) After separating the iodoform from the mother-liquor pass chlorine through the latter, or add liq. sodæ chlorinat., in order to free the combined iodine, then add a little more spirit and bicarbonate of soda. Iodoform is again separated. You may continue to work in this way until you get 4 or 5 drachms of iodoform for every ounce of iodine used. After that the liquors must be treated as waste or the iodine recovered from them. (2) Amber resin in small pieces is a commercial article.

182/66. *Solazzi.*—Yes, filter the mixture.

177/63. *Cayman* (Jamaica).—(1) Oil-soluble brown aniline dye would be a suitable colour for the castor oil. We can think of nothing else which will give a dark-brown colour. (2) Try the addition of a little saccharated solution of limo to the mucilage. Probably it is some derivative of arabic acid that has been precipitated.

181/8. *F. D. P.*—(1) The Marks or Brands of Aniline Dyes refer to the intensities of the colours. R stands for red (*roth, rouge*), O for orange, G (*gelb*) and J (*jaune*) for yellow, B for blue (*blau*), V for violet, and so on. The D after aniline green stands for dark (*dunkel*). Dark shades are

indicated generally by several letters—*e.g.*, BB, BBB, or 2B, 4B, &c., in the case of the blues. E after aniline black stands for *ccht* (genuine). (2) Methyl Violet, or Paris violet, is generally known as aniline violet. It is the hydrochloride of pentamethyl-pararosaniline. There are several aniline violets—*e.g.*, Hofmann's methyl-violet, 2B to 6B, crystal violet, spirit violet, &c.

180/33. *Alpha.*—(1) According to Professor Attfield Kolanuts contain about 2.2 per cent. of caffeine. The albuminoid substances of the drug appear to render assimilation of the active principle slow, but proof spirit suffices to extract it. There are several formulæ for kola preparations in the last two volumes. (2) To estimate the amount of soap in dry soap treat as Mr. Cripps describes (pp. 775-6) for free and combined alkali in soap. You will in this way get figures which should serve in any comparisons.

182/60. *Vet.*—The Drying-salve for Cows' Udders appears to be Turner's cerate.

124/4. *C. C.*—You can make Bird lime from mistletoe in the manner so long in use for making it from the holly. Take the mistletoe and boil for half a day or more in water until it becomes soft, then pack in layers in a hole made in the earth, protecting it with cabbage leaves or the like, and cover with a layer of stones. In the course of two or three weeks the mass ferments and becomes mucilaginous; when in this state remove, and beat to a uniform mass in a mortar. Finally knead well in several waters, in order to clean it.

176/38. *A Subscriber.*—(1) There are many methods for waterproofing canvas, which are more or less successful on the large scale, with good appliances; but there are few which are so satisfactory as treating with boiled linseed-oil to which some painter's dryer has been added. A good waterproof coating may also be given by applying hot a solution of 1 oz. of gelatine in 12 oz. of water, to which has been added 1 oz. of chrome alum dissolved in 2 oz. of hot water. This must be used at once. (2) Try conc. infusion of senega to emulsify the oils—20 drops to 1 oz.—if that is not objectionable.

180/30. *A Microbe.*—You can get the names (with a few exceptions) of everyone living who has passed the Minor from the Register published by the Pharmaceutical Society. We cannot spare space for letters advocating such a hopeless crusade as the limitation of the sale, by retail, of "all patent medicines, drugs, and chemicals" to chemists and druggists. Have you considered what your comprehensive three words would include? Shall the trade in soap and soda, for instance, be confined to chemists? Would any number of "forms" signed by chemists and doctors throughout the country make that a reasonable demand? Remember that the Government will not even add carbolic acid to the schedule. Get that done before embarking on such a scheme as you have imagined.

119/3. *G. C.*—(1) The gelatinisation of the Peptone depends upon its strength. If you take a pound of lean meat, place it in a gallipot, with 3 or 4 oz. of water, a pinch of salt, 10 minims of hydrochloric, and a piece of pig's stomach (fresh), and proceed to make beef-tea in the ordinary way, you get at the end of three hours a liquor which, after straining and cooling, is a nice jelly, partly peptonised. (2) Acid Glycerine of Pepsin.—October 10, p. 563. (3) You will get better results with isinglass than with gelatine in detannating port wine. Use 1 drachm to the pint, and allow to stand for a fortnight before decanting. (4) Capsules. See the article by Mr. J. A. Forret, in THE CHEMIST AND DRUGGIST, August 30, 1890.

125/18. *Cephas.*—"Whitla's Pharmacy" is a good book; but for the new Minor examination, we think that the details given in "Proctor's Pharmacy" are necessary. See the DIARY list of books.

177/11. *Nemo*.—Half a teaspoonful of boric acid is sufficient for 1 lb. of sausages. It is customary to mix from 25 to 50 per cent. of nitre with the acid, so as to bring out the red colour of the meat, or this may be done by adding a little phosphine.

164/63. *T. F. E.*—Antifebrin does dissolve in a solution of tartaric acid, but it is impossible to administer it in that way. You can make a good Antifebrin Elixir from the following formula:—

Antifebrin	128 grains
Rectified spirit.. ..	10 drachms
Glycerine	1 oz.
Tincture of fresh orange peel to ..	4 "

Reduce the antifebrin to fine powder, and agitate with the rectified spirit until dissolved; then add the glycerine, mixed with 1 oz. of the tincture, and make up to 4 oz. with the tincture.

A fluid drachm of this elixir contains 4 grains of the remedy, so that an ordinary teaspoonful will represent a good dose, and may be taken in half a wine glass of water.

177/31. *D. R. M.*—Ung. Iodidil Co., U.S.:—

Iodine	15 grains
Iodide of potassium	30 "
Water	30 minims
Lard	1 oz. (troy)

Make in the same way as the B.P. ointment.

145/8. *H. F.*—The two powders appear to be simply powdered white and mottled Castile soap. It is scarcely conceivable that anyone can have paid 5s. an oz. for them.

184/48. *Canis*.—Distemper Powder for Dogs.—Your sample, as near as we can make it, consists of the following:—

	Drachms.
Nitrate of potash	4
Black antimony	2
Sulphur	1
Fennel (powdered)	1

Mix.

From 10 to 30 grains of this is sufficient for a dose.

187/37. *L. J. F.*—Your pig-powder is not sufficiently distinctive to enable us to get at its composition.

153/25. *P. C.*—The Phosphorus Paste, which you say is very destructive to beetles, may be made in the following manner:—

Phosphorus	10 grains
Lard	1 oz.
Olive oil	1 "
Biscuit-flour	1 "

Dissolve the phosphorus in 20 drops of bisulphide of carbon, and add it to the lard melted in a warm mortar; stir for some time to get rid of the bisulphide as far as possible, adding the olive oil, also warmed, and finally the biscuit-flour to make a paste.

175/9. *Halifax*.—Surely the powder which you send is not a Food for Cattle? It is more like a condiment. Its composition is on the following lines:—

Ground cotton-seed cake	4 lbs.
Linseed meal	1 "
Powdered nitre	6 oz.
Bicarbonate of soda	2 "

Mix.

179/54. *Naga* (Upper Assam) sends a sample of a powder which he scraped from a brick wall built from native bricks by natives. He scraped about 1 lb. of the effloresced mass from the wall. We find it to be Ammonia Alum chiefly, with a little insoluble matter. It doubtless arises from the clay used in making the bricks.

87/21. *Cicero*.—You do not tell us what your powder is used for.

132/24. *N. B.*—Ointment for Easing Pain.—The sample which you send is not unlike "hippocra." Try the following formula:—

Camphor	5j.
Oil of cajuput	5j.
Oil of peppermint	5 drops
Lard	5 lbs.
Wax	5j.
Rosemary-leaves	5j.

Digest the last three ingredients together for an hour, put the first three in a covered pot, strain the hot lard, &c., upon them, stir, and cover. Stir occasionally until cold.

137/41. *Radix*.—(1) The Horse Powders are:—

	Oz.
Black sulphur	4
Nitre	2
Fenugreek	1
Anise	1

Mix.

(2) The Heel ball is a mixture of hard paraffin of the highest melting-point (65° C.) and lampblack.

182/33. *Coal Tar*.—You should tell us what the nature of the fluid is in which you wish to Detect Aniline Colour. Generally one may get indications of the presence of the latter by adding ammonia to the fluid until distinctly alkaline; then shake with ether, which will extract the base. Remove the ether and shake up with dilute hydrochloric acid. The colour will be restored.

183/16. *Assistant* (Devon).—We presume that the sulphate-of-ammonia stains are tarry; if so, try the effect of chloroform on the ivory. Place a little pad of blotting-paper on the spot and drop the chloroform on the paper. Renew when dry.

182/26. *Taff Vale*.—You may pass a current of chlorine gas through the syrup of iodide of iron; by so doing precipitate the iodine, collect it, wash with water, and use again in making syrup. But is the game worth the candle? It may cost you as much in chemicals and time as it would to replace the iodine. Assistants who boil syrup ferri iodidi sufficiently to char it and then attempt to remedy their error by filtering the syrup through animal charcoal have gained a bit of experience worth paying for.

177/57. *H. A. F.*—Salt of sorrel is used by soldiers for taking stains out of Scarlet Cloth. A solution of carmine in ammonia may afterwards be used to restore the colour.

181/50. *Querist*.—(1) The precipitate in the Quinine Wine caused by boiling is, most likely, calcium sulphate. We do not see where the difficulty about filtering comes in. You say that "on standing the precipitate subsides leaving a clear liquid." Why not decant the clear portion and filter the sediment? (2) *Liquor Opii Sedativus*.—There is a good formula for this in our issue for February 28, 1891, page 321.

Information Supplied.

123/17. *Vin St. Raphael* is a natural wine. You can refer to Mr. Begin's articles in the *Union Medicale*, May 8 and June 14, 1873, or write to the Compagnie Propriétaire du Vin St. Raphael, Valence, Drome, who publish a pamphlet relative to the same.

Nice.

VERITÉ. (148/1.)

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INFLUENZA.

Its History from compilations by Dr. Parkes, Sir Gregory Baker, Dr. Farr, and Hilton Fagge.

THE History of Influenza carries us back to a period so remote that reliable information is wanting—even earlier than 1741, when its name was introduced from Italy; but since then the evidence is comprehensive and trustworthy. In analysing these records which have been carefully compiled by Dr. Parkes, Sir Gregory Baker, Dr. Farr and others, there is a striking uniformity of deductions as to the conditions which

INFLUENCE THE DEATH-RATES,

and the principles upon which treatment should be founded, although there is considerable difference of opinion as to the means by which the disease is distributed. Hilton Fagge states that "it does not spread from one patient to another, or to relatives or nurses of the sick"; on the other hand, Bristowe asserts that "it is infectious in a very high degree, and that it may be imparted by a contagium, which, like other contagia, is specific, multiplies indefinitely in the body and is thence evolved in marvellous abundance." Perhaps the secret of this wide divergence is due to the difficulty in clearly defining several diseases which have much in common.

Fagge says: "The number of those who fall ill with Influenza is greater beyond all comparison than in the case of any other disease, but almost all the mortality is brought about by indirect means. In the great epidemic of 1847, out of 250,000 persons attacked in London, 5,000 died in six weeks. Those who die are chiefly old and debilitated subjects who have laboured with Emphysema of the Lungs or who have feeble and dilated hearts." Dr. Parkes confirms this view, and also states that it precipitates the course of Phthisis. Dr. Farr has pointed out that the mortality is invariably high in those districts in which a high mean death-rate prevails. Now, all these points, irrespectively of the well-known symptoms, conclusively indicate the necessity for a highly nutritious and stimulating treatment. Likewise the maintenance of the general health during the visit of an epidemic—especially, too, since one attack

DOES NOT CONFER IMMUNITY,

and according to Fagge's theory isolation and other measures for protection against contagion would be powerless. Depletive measures are universally condemned, yet one saline purge in the early stage, followed by ordinary salines and then ammonia with senega, is advocated by Fagge. Quinine and other antipyretics are of course general favourites, but quinine so frequently increases the headache that patients cannot tolerate it.

Parkes particularly condemns the administration of large quantities of hot beef tea, since it invariably increases the languor, and many do not require stimulants till the acute period passes off, *when a good supply of food is necessary.*

Guided by such experienced remarks, the only question then arises, What food shall be given? Hot Beef Tea is condemned—have we anything containing the nutrient necessary for contracting the prostration and hastening convalescence? ¹ Caffyn's Liquor Carnis, or preparations of Raw Beef have none of the disadvantages of Beef Tea or alcohol, yet

THEY ARE STIMULANTS

as well as nutrients, but they do not excite; they are rapidly assimilated and so correct the waste necessarily attendant upon pyrexia. They do not overload the system with a quantity of waste material, so throwing an extra strain upon the overtaxed excretory organs, and "increasing the languor" as complained of by Parkes respecting ordinary beef tea. Very little food is required during the early stage, but that little must be good. The appetite is invariably lost, therefore these preparations being refreshing and pleasant to the palate will be taken readily when ordinary kinds of food are refused. They will be found equally serviceable in a prophylactic measure by increasing the strength and resisting powers of those who may have been previously reduced in tone by other illnesses, or whose age renders them particularly susceptible to the attack of this disease. Next in importance to the treatment of the disease itself in this, as in other epidemics, is that other troublesome epidemic—panic. This is often more difficult to combat than the actual disease, and practitioners will agree that a large percentage of their cases belong to this category.

The influence of the fixed idea in health and disease plays such an important rôle that it must not be disregarded. In one whose nervous system is highly sensitive and whose frame is not robust, the false symptoms are easily developed, and become of such real proportions that the patient no longer questions their reality, even when the stethoscope and the thermometer fail to corroborate them in the hands of the medical attendant. It therefore becomes a necessity to maintain such patients at such a time in a healthy condition of mind and body, so that the untenableness of the ideas becomes so conclusive, and the imaginary or subjective symptoms are relieved as quickly as those of the patient who, after

SWALLOWING [?] HIS FALSE TEETH,

localised them successively in his throat and stomach until they were fortunately discovered under the sofa [*Journal of Laryngology*]. To restore or maintain this healthy equilibrium a mild tonic treatment with mineral acids and strychnia—combined with ² Caffyn's Malto-Carnis, or other Raw Beef preparations, will be found to succeed admirably, and so relieve Influenza of many of its imaginary terrors, for which sensational journalism is in no small measure responsible.

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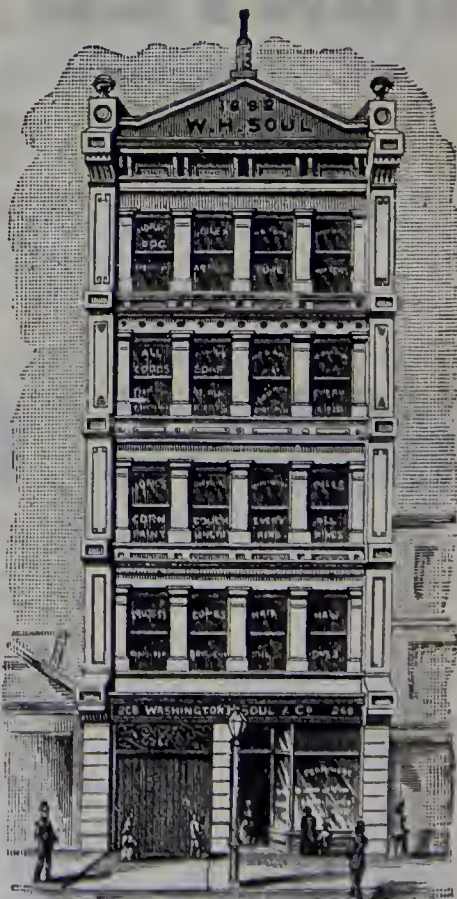
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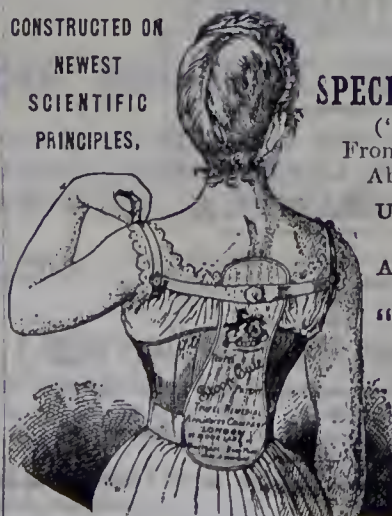
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Salvine Dentifrice, Tubes, boxed, Medium ...	1/6	12/-	" " " unstamped	1/6	12/-
Salvine Dentifrice, Tubes, boxed, Large ...	2/6	20/-	(Salvine Cream unstamped is for compounding prescriptions only.)		
Salvine Tooth Brush, boxed, Ladies' 1/-	7/9		" " Medium, stamped	3/6	28/-
" " " Gents' 1/-	7/9		" " " unstamped	3/-	24/-
" " " Children's 7/4	5/6		" " Large, stamped ...	6/-	48/-
" Soap, Toilet, box 3 tablets 2/-	17/6		" " " unstamped	5/-	40/-
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" " " " ... 2/6	20/-		" " Medium ...	3/-	24/-
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Is most admirably adapted for pocket use, combining great beauty of design with the maximum of convenience.

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Double	14/	18/6	22/6	28/	36/	44/	1/6						14/
Vest shape, to button in front	18/	24/	30/	36/	42/	55/	2/						17/
Natural Grey or Fur-Felt							2/6						27/
Single	6/6	9/6	12/	15/6	20/	25/6	3/6						30/
Double	15/	20/	25/6	31/	42/	51/6	6/						/



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Tubes, 2s. each; Half Tubes, 1s. each. Pomade in vials, 5s.
HUMAN VACCINE, from healthy children only, microscopically examined and source quoted. Tubes two-thirds full, 1s. 3d. each; Tubes one-third full and Lancet-charged points, 1s. each; Pin-points, 1s. 1d. each. Eighteen charged Small Points, 5s. Tubes two-thirds full (same as those mentioned above, but without source), in quantities for export, £5 per 100 Tubes. Pin-points uncharged, 1s. per dozen. Vaccine Ejectors, 1s. 3d. each, including postage. Vaccinations by appointment. P.O.O.s (including postage, and crossed London and Westminster Bank) with orders, payable to
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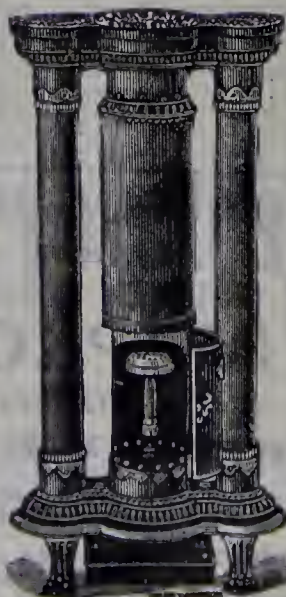
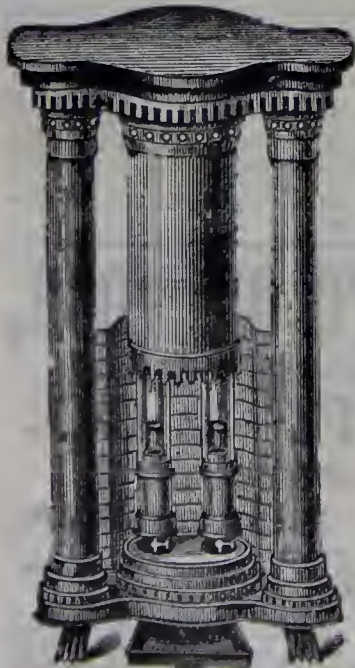
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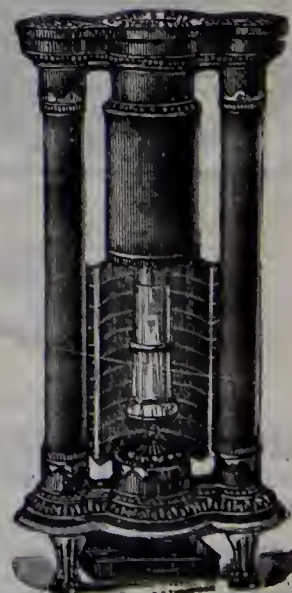
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Simple in Construction.

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HAS NO TUBES.

ONLY 2 PIECES.

6/6 PER DOZ.

6/6 PER DOZ.



Allows free admission of Air, and is easily cleaned.

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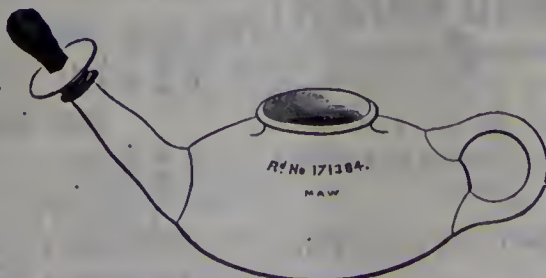
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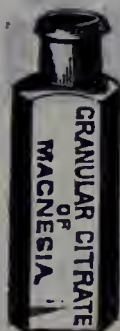
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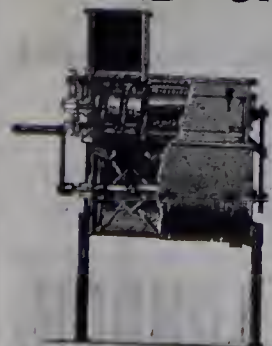


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A SAMPLE BOTTLE FREE ON APPLICATION.
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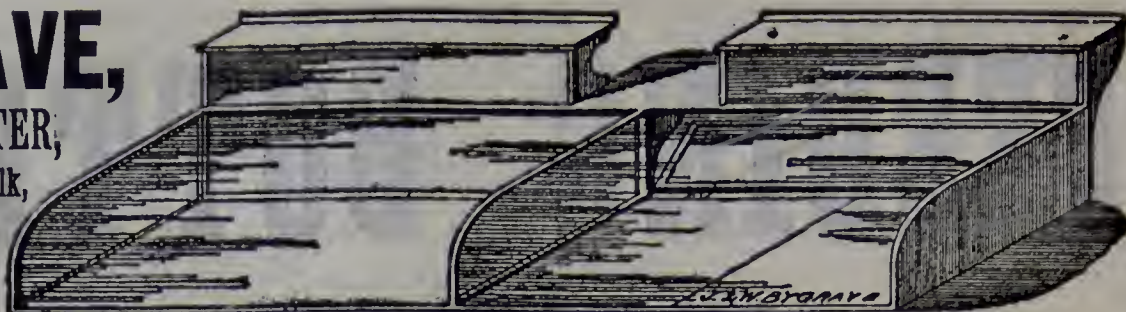
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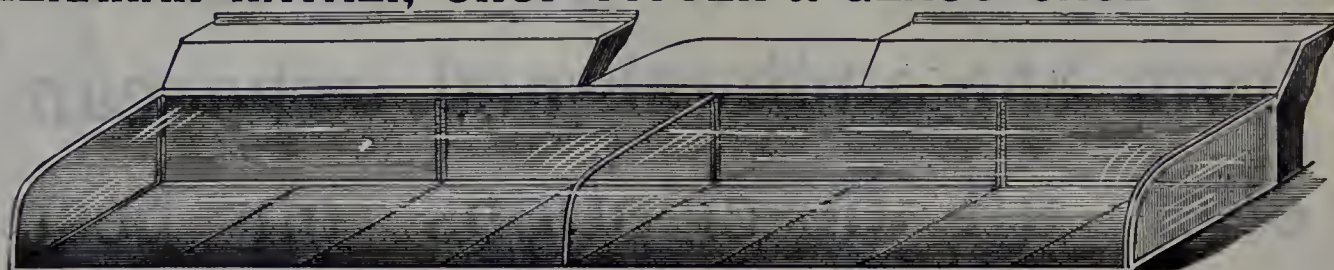
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[COPY].

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